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ABSTRACT

Assessing the effectiveness of institutional efforts in student retention in Georgia higher education is addressed in papers from a conference sponsored by the University of Georgia. Included are Patrick T. Terenzini's keynote address, "What Research Tells Us about Student Retention" and an address by Harry Carter, "Student Retention as a Measure of Institutional Quality." From seven panels on retention, the following papers/authors are represented: "College Entrance Requirements That Make Sense" (Nathaniel Pugh, Jr.); "The Special Problems of Retaining Technical Students" (Jennifer Coplin); "Problems in Defining Vocational-Technical Retention Statewide" (Fred E. Kiehle, III); "Principles of Learning and Development: Can They Help in Retraining Students?" (Cameron Fincher); "Placement and Retention in Remedial/Developmental Programs in the SREB States" (Ansley A. Abraham, Jr.); "Factors Influencing Retention in Private Four-Year Colleges" (M. Willisia Holbrook); "Retention Programs That Work in Private Two-Year Colleges" (Ronald Weitman); "Retention Issues in Medical and Health Education: The Academic Health Center" (Jean A. Morse); "A Retention Model for Minority Students in Allied Health Professions" (Lynda D. Woodruff, Delmas J. Allen); "Institutional Studies on Retention: A Taxonomy" (Larry Jones). (SW)

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HIGHER EDUCATION IN GEORGIA

ASSESSING THE INSTITUTIONAL EFFECTIVENESS OF STUDENT RETENTION

PROCEEDINGS OF THE FOURTH CONFERENCE

EDITORS

Cameron Fincher
Larry G. Jones
Joyce Placak

U.S. DEPARTMENT OF EDUCATION
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HIGHER EDUCATION IN GEORGIA:

ASSESSING THE INSTITUTIONAL EFFECTIVENESS OF STUDENT RETENTION

PROCEEDINGS OF THE FOURTH CONFERENCE
DECEMBER 1-2, 1986

EDITORS

Cameron Fincher
Larry G. Jones
Joyce Placek

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OFFICE OF INSTITUTIONAL RESEARCH AND PLANNING
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Preface

The theme of the fourth annual conference on research in postsecondary education was, "Assessing the Institutional Effectiveness of Student Retention." The conference was held on December 1-2, 1986 at the Georgia Center for Continuing Education and was sponsored—in cooperation with the University System of Georgia—by the University of Georgia's Institute of Higher Education, Office of Institutional Research and Planning, and Center for Continuing Education, sponsors of the three previous conferences.

The conference was attended by at least 100 participants who represented over forty different postsecondary institutions or educational agencies in Georgia or the southern region. The keynote speaker for the conference was Dr. Patrick Terenzini, a nationally known scholar and researcher on student achievement and persistence in college, who joined the Institute of Higher Education in July 1986 as professor of higher education. In his keynote address Dr. Terenzini provided an excellent summary and interpretation of the published research on student retention and called attention to the remarkable stability of student retention rates throughout the 20th century.

Other program participants discussed in commendable fashion the difficulties of establishing high school graduation and college entrance requirements that will ensure better student retention at the postsecondary level; the special problems and issues that are involved in retaining students in vocational technical programs; the unusual difficulties of student retention in programs of preparation for allied health professions; and the particular problems of placement and retention in developmental studies.

Two other program participants gave superb insight into the nature and content of formal retention courses that are effective in retaining students. Another panel of experienced practitioners discussed, with many helpful suggestions, institutional characteristics and conditions that affect student retention in private colleges and technical schools. Two well-known institutional researchers gave the benefit of their long experience in a "mini-workshop" on how to conduct institutional studies on student retention.

In the closing session of the conference, Dr. Harry Carter, vice president for academic affairs and acting president at Georgia Southern, emphasized the importance of student retention as a measure of institutional quality. In a concerted effort to advise and to assist students experiencing academic difficulties, Georgia Southern was able to increase signficantly its retention of "new first-time, full-time freshmen."

The editors of the proceedings are most appreciative of the valuable contributions by those who helped plan the fourth annual research conference, who prepared papers or panel presentations, who served as chairs or moderators for various sessions, and who participated actively by raising many of the right questions at precisely the right time. The editors are also indebted to Donna Davis for her preparation of camera-ready proceedings twice within the span of a single year.

To place the annual research conference on a fall schedule, both the third and the fourth annual conferences were held during the calendar year of 1986. Thus, the fifth annual research conference is scheduled for November 30-December 1st, 1987 and invitations to the conference will be issued as soon as an appropriate theme has been developed.

Cameron Fincher
Larry G. Jones
Joyce Placek

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Professor of Higher Education
Institute of Higher Education
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Keynote Address

WHAT RESEARCH TELLS US ABOUT STUDENT RETENTION

Patrick T. Terenzini
Professor of Higher Education
Institute of Higher Education

More than a decade ago, Sandy Astin said that "Dropping out of college is a little like the weather: something everybody talks about but no one does anything about" (Astin, 1975, p.1). Clearly, times have changed. Our presence here today, and that of people like us at similar conferences around the country, are evidence of that change. Today, retention is big business, and it's about time. The motives behind our keen—and recent—interest in student retention are open to some question, however, for there is a clear correlation between the rate of decline in the number of traditional high school graduates and the fervor with which we pursue ways of increasing institutional retention rates. But correlation is not causation, and even if it were, in this instance I am not too bothered. American higher education is, I think, sometimes like the U.S. Congress: doing the wrong things for the right reasons, and the right things for the wrong reasons. At least (and at last) we are now doing the right things—for whatever reasons.

Today, I would like to explore with you five questions relating to college student retention:

1. Why is retention in Georgia, and elsewhere in the South, worth worrying about?
2. How much of a problem is it?
3. What does the research on retention and attrition tell us?
4. What does that body of research not tell us (and why)?
5. Where do we go from here?

Before we take up these questions, however, let us be clear that attrition is not necessarily a bad thing or contrary to the best interests of institutions or students. What constitutes "dropping out" is, in fact, a matter of perspective. From the individual's point of view, withdrawal from a collegiate program may reflect the fact that the individual got from the institution exactly what he or she had come for. In studying attrition and retention, we must add to our conventional typology of "persisters," "dropouts," and "stopouts" a category for "attainers": those who persist and succeed, but whose definitions of "persistence" and "success" do not include completion of a traditional certificate or degree program.

Similarly, students must accept (and we must give them) some responsibility for their own educations. We must take greater care to include in our research measures of student effort (see Pace, 1984). We must differentiate between students who withdraw after making a good-faith effort and those who withdraw in the face of self-induced failure.

From an institutional perspective, one must take into account institutional mission. For example, I don't think we'd want to label as "dropouts" those students who transfer from a two- to a four-year college, nor to infer that, somehow, the two-year institution is not doing its job. Indeed, under certain conditions, a student's transfer—whether from a two- or four-year institution, may very well constitute both an individual and institutional achievement, a cause for happiness and pride, rather than concern.

With the understanding that "attrition" is a matter of definition and that we must exercise care with our categories and terms, let us turn to the first of our five questions.

1. Why is retention in Georgia and the Southeast worth worrying about?

All of us are familiar with the standard arguments for attending to student retention: the pool of high school graduates is shrinking; minority college student enrollment levels are no longer climbing; a student retained is a student you don't have to recruit; a penny saved is a penny earned, and so on. It costs as much to recruit, admit, enroll, register, advise, counsel, house, teach, and so on the student who drops out after a year as it does to provide the same services to continuing students. But there are other compelling reasons in the State of Georgia, in particular, and in the Southeast in general. A study for the Governor's Committee on Postsecondary Education found that, in 1980, the postsecondary education participation rate for the South overall was 18 percent below the national average. In Georgia, the rate was 25 percent below the national rate. The report noted that "Among the fourteen individual Southern states . . ., Georgia's rate ranked tenth (and) was higher than that of only one of the five states along its borders (Kiehle, undated, p. iv).

The picture was not much different when degree completion rates were compared. Georgia's college graduation rate was 20 percent lower than the national average, placing the state ninth among the fourteen Southern states and ahead of only one adjacent state (Kiehle, undated, p. iv). The report concluded:

> Overall . . . the findings . . . do not seem to describe a state which is prepared to compete effectively in a future where the importance of a trained and educated work force is growing (Kiehle, undated, p. iv).

Because of these comparatively low participation rates, one might reasonably argue that increasing college student retention is even more important in Georgia than it is in other states where high school degree completion and college participation rates are higher. Retention is intimately related not only to the ability of our colleges and universities to maintain current enrollment and funding levels, but also to the state's prospects for future economic growth. As the Governor's Committee report notes, "the traditional attractions (of the South) to business and industry—a nonunion work force, low wages, low taxes, and a good climate—are often an inadequate inducement to the new industries emerging from the recent and continuing advances in technology" (Kiehle, undated, p. 1). Finally, and perhaps most importantly, level of education is inextricably tied to the quality of the social, cultural and political life that a people enjoy. The Dark Ages were more than a metaphor.

2. How much of a problem is student retention?

The question of volume is a reasonable one, for we seek some sense of how we are doing relative to others, some sense of whether we should be worried about retention rates on our own campuses.

Table 1 offers a comparison of one-year retention rates among first-time, full-time students in University System of Georgia institutions and nationally. As can be seen consistent with national data, retention is higher at the universities than at state colleges, and both have higher retention rates than the junior colleges, regardless of the category of student. It is worth noting that in the university and senior college groups, the one-year retention rates for Black first-time freshmen were generally greater than those for all other students. Among the junior colleges, however, this relation was reversed. As the students progress to the higher class levels (sophomores and juniors), however, retention rates for Black students lag behind those of all other students. This phenomenon warrants, I believe, careful and immediate study at both institutional and state levels.

It is also worth noting that the average one-year retention rates at the universities exceed those of four-year colleges at the national level, while the rates for Georgia's senior and junior colleges are slightly below the national average. Perhaps most revealing, however, is the range in the one-year retention rates across the institutions in each sector. The variation is considerable.

Table 2 arrays national retention and graduation rates at different types of institutions over varying periods of time: the freshman year, two years and graduation in three and five years. Three things are striking about these data: first, the one-year retention rates for different cohorts of students are approximately the same, suggesting reasonable stability over time.

Second, notice the five-year graduation rates for four-year institutions. The figures reported here are somewhat higher than those in other studies, but the point is clear: graduation four years after matriculation can hardly be considered the norm. Indeed, while we used to believe that the student who failed to complete a degree in four years was atypical, in fact, an entering freshman was about as likely to drop out as complete a degree program. This continues to be the case.

Third, while the tabled figures are for "retention," we can derive some interesting "attrition" statistics by subtracting the retention figures from 100 percent. When we do that, it is clear that, for both two- and four-year institutions, attrition is largely a first-year phenomenon. Using the public four-year institution figures to illustrate, we can see that on the average 33 percent of our freshmen do not return for their sophomore year, compared with a five-year attrition rate of about 47 percent. Put another way: 70 percent of those who will leave over a five-year period will withdraw before the second year. Among two-year institutions, the situation is even more dramatic: 46 percent attrition in the first year, compared to 59 percent attrition over a three-year period. That's nearly 80 percent of all dropouts leaving in the first year. The message is clear: if you wish to increase your institution's retention rates, concentrate your efforts on the first year.

It is worth noting that national retention rates have been virtually invariant for the last century. World War II caused a drop in the trend line, followed by a sharp but short-lived rise occasioned by the G.I. Bill, but with those exceptions, the national degree completion rate at baccalaureate degree granting institutions has held virtually constant at about 50 percent since 1880 (Tinto, 1982). It will be interesting to see over the next decade whether actions taken in the heat of our current national concern with retention produce any appreciable change in that historical pattern.

3. What does the research on retention and attrition tell us?

In answering this question, I will focus on those variables that the research indicates have some socially, educationally or administratively significant role in student retention. In so doing, I will not be mentioning many variables that have statistically significant associations with retention, but which are, in my view, substantively less important, if not trivial.

Of all pre-college student characteristics, the single-best predictor of subsequent attendance patterns is high school achievement. Such a conclusion should come as no surprise: high school achievement represents an index of performance in an educational setting with many of the same social and academic requirements as college, and it reflects a student's ability to meet the available competition. The student who succeeds in one setting, in general, can be expected to succeed in another, similar setting. Academic aptitude is also consistently and reliably related to subsequent attendance behaviors, but its influence is less pronounced.

It should be noted, however, that many students who withdraw from college have achievement and aptitude scores that would

TABLE 1

COMPARATIVE ONE-YEAR RETENTION RATES OF FIRST-TIME, FULL-TIME STUDENTS AT USGA INSTITUTIONS AND NATIONALLY

	University System of Georgia (percentages)				
Category	Universities	Senior Colleges	Junior Colleges	National Average 4-Yr	2-Yr
Developmental Studies					
Blacks	78	58	46		
All Others	73	52	47		
Total	75	55	47		
Range	68-85%	45-62	35-55		
Regularly Admitted					
Blacks	80	71	53		
All Others	79	62	60		
Total	80	63	60		
Range	71-83%	57-76	47-69		
All First-time, Full-time					
Blacks	79	61	48		
All Others	79	59	55		
Total	79	60	54	66	55
Total Range	70-83%	53-73	39-64		

Source: H.R. Pounds & W.K. Cheek. Planning for student retention in the university system of Georgia. Paper presented at the annual conference of the Southern Association for Institutional Research, Virginia Beach, 1985.

TABLE 2

RETENTION AND GRADUATION BY TYPE OF INSTITUTION, NUMBER OF INSTITUTIONS REPORTING AND PERCENTAGE OF STUDENTS WHO ENTERED AS FRESHMEN

Institution	Retention After One Year					
	1975-76		1976-77		1977-78	
	N	%	N	%	N	%
2-Year Public	74	55	82	55	92	53
2-Year Private	27	63	29	64	30	63
Nonsectarian	12	63	12	62	12	64
Religious	15	61	17	65	18	62
4-Year Public	99	68	103	67	104	66
4-Year Private	207	71	222	71	227	71
Nonsectarian	66	73	72	73	76	74
Religious	141	71	150	70	151	68

Institution	Retention After Two Years				Graduation			
	1975-77		1976-78		3 Yrs		5 Yrs	
	N	%	N	%	N	%	N	%
2-Year Public					188	41		
2-Year Private					46	61		
Nonsectarian					18	63		
Religious					28	60		
4-Year Public	85	56	78	55			135	53
4-Year Private	176	57	178	57			306	60
Nonsectarian	52	63	55	63			105	64
Religious	124	55	123	54			201	58

Note: Reprinted from Beal and Noel (1979)

Source: Lenning, O.T., Beal, P.E., & Sauer, K. *Retention and Attrition: Evidence for Action and Research*. Boulder: NCHEMS, 1980.

predict success in college. Indeed, in several studies, dropouts have higher high school grades and standardized test scores than do persisters. Moreover, the evidence on the power of high school grades and academic aptitude in predicting retention among community college students is ambiguous.

The socio-economic status of a student's family has also consistently been found to be positively related to retention, although the evidence is not entirely unambiguous. The evidence indicates that parents' educational attainment level is probably a somewhat more powerful predictor than income.

Race or ethnicity is also involved. Retention probabilities for Hispanic students are lower than those of Native American and Black students, whose chances of completion are, in turn, lower than those for whites. Oriental students typically have a higher retention rate than whites. Astin (1971, 1973, 1975), however, has developed evidence suggesting that once aptitude and achievement are taken into account, completion rates among Black students are reliably higher than those of whites.

Among community college students, however, Astin's evidence indicates that even after controlling for students' aptitudes and achievement levels, Black students' probabilities of completing are lower than those of whites. At the same time, however, Peng and Fetters (1977) found no differences.

A relatively large body of research indicates that the motivations and aspirations students bring with them to college, and their parents' hopes and expectations, are significantly involved in students' attendance patterns. The determination to complete college, the intention to seek a graduate or professional degree, the possession of clear-cut goals, and a commitment to the accomplishment of those goals are all predictive of college completion.

So far as institutional traits are concerned, retention rates vary from one institutional type to another. The evidence is generally consistent in indicating that retention rates are higher in private than in public institutions, and that tendency holds in four-year colleges and universities as well as in two-year institutions.

Housing is certainly important. The evidence is consistent and strong that students who live on-campus are more likely to complete college than students who live off-campus or with a parent or relative. Students living at home are at greatest risk of dropping out. It follows, of course, that two-year and commuter institutions have lower retention rates than four-year and residential colleges.

Finances are perhaps the most frequently-cited reason students give for withdrawing from college, and certainly institutions can exert some control over the type and amount of financial aid awarded. While financial considerations are no doubt involved for some individuals, the evidence indicates that monetary reasons may be less influential than we might expect.

We have discussed a number of individual and institutional variables that the research suggests are important in retaining students. But the evidence is substantial in indicating that the personal and academic baggage students bring with them to college is less important in retention than are other considerations. And, of course, institutional traits like type and size are unlikely to change (although some campuses have changed their spots). Thus, we must look elsewhere for the major influences on attrition and retention.

Intuitively, we sense that retention behavior is a function not of single variables acting independently of one another, but rather of a web-like network of variables acting simultaneously. Research on student retention over the last 5-10 years has consistently pointed toward the sources of attrition and retention as interactive, as involving both individual and institutional variables acting upon one another. Tinto uses the terms "academic and social integration," Astin

prefers the term "involvement," Rootman uses "person-role fit," and Stern spoke of "ecological niches." Whatever the nomenclature, the condition or phenomenon being described is, essentially the same. The greater a student's engagement in the academic and social life of the campus, the higher the probability of continued enrollment.

Among the manifestations of social and academic integration most consistently found in the recent research literature to be positively related to retention is students' interaction with faculty members outside the classroom. In some instances the salient variables deal with the frequency of student-faculty interaction. In other studies, the quality of the contact appears to be critical. In still others, the purpose of the students' contact with faculty seems to be the critical consideration. For example, academic-related forms of student-faculty contact appear to be more important than social forms of contact, although I think it is reasonable to conclude that any form of student-faculty interaction is important in retention and certainly preferable to no contact at all.

Another group—other students—is also involved in retention and are significant agents of socialization on a campus. Students, whether as an aggregate group or as a subset of an institution's student population, define and occupy an academic and social environment. To the extent that an individual student's needs, interests, skills and values resemble those of the peer group, normative academic and/or social integration, and therefore retention, are more likely. Conversely, mismatches between the individual student and the surrounding academic and social worlds are likely to lead to a sense of marginality, if not isolation, and subsequently, to withdrawal.

It is important to note, here, that the fit between the individual student's interests and values and those of a subgroup of other students may be sufficient to "hold" a student at an institution. So long as there is adequate integration in a subgroup of the student community, then prospects for retention are increased. In this respect, both the size and heterogeneity of a student body became important. The larger and more varied the student community, the greater the likelihood that an individual will find a sufficient number of others who share a particular constellation of interests, needs and values and with whom the student can associate and affiliate.

So far as student support services are concerned, I think it could be reasonably argued that no single program or service by itself exerts a significant influence in students' retention decisions. That is not to say that such programs and services are unimportant, but only to suggest that their primary contributions to retention are indirect and through the provision of opportunities for students to engage in, and affiliate with, their academic and social communities. Athletics, clubs, church groups, student government (at whatever level), membership on departmental, college or campus governance committees—all constitute points of contact with the institutional environment. No single opportunity, or perhaps even class of opportunities, has yet been unequivocally and powerfully linked to retention. But taken together, in the constellation of possible experiences that is the collegiate environment, they become collectively important, and improvement in one constitutes an improvement, however slight, in the whole.

4. What does the research not tell us (and why)?

The sad truth is that more is unknown than known about attrition and retention. Despite the enormous volume of research done on this topic, it is a rare study indeed that explains more than 30-35 percent of the variance in students' attendance decisions. That leaves 65-70 percent of the variance unexplained! We have come a long way in our understanding of the dynamics of student retention, but, clearly, we have a ways yet to go.

First, we are particularly deficient, I believe, in our knowledge of the influence institutions have on students' decisions to

continue or to withdraw—what I have called the "institutional contribution" to attrition, those sources of attrition over which institutions have some control. Only in the last 5-8 years has research interest turned from analysis of the role of student characteristics to the nature of students' campus experiences and their part in the attendance and withdrawal processes. Our understanding and appreciation of the role faculty members play in students' retention and academic and social development has increased over the last six to eight years, but we still know very little about the extent to which non-teaching professional and clerical staff members may exercise similar (or different) influences on students, and the roles students play in each other's retention and academic and social integration and development remain relatively obscure.

Second, our present models, designed as they are by graduates of four-year, residential colleges and universities, display a decided bias toward that form of postsecondary education. Only recently have retention models emerged that attempt to explain attendance patterns in commuter institutions (e.g., Pascarella, Duby & Iverson, 1983), in two-year institutions, or among nontraditional students (e.g., Bean and Metzner, 1985). Consequently, present inquiry in these settings must be based on theories that have been taken from one institutional context and jury-rigged to function in another.

Third, our current definitions and theories offer little in the way of advice for understanding the role of student goals and effort. Only within the last five years have we paid meaningful attention in our retention typologies to the "attainers" (those who have accomplished goals that do not include certificate or degree completion).

Fourth, I know of no study that has monitored a cohort of students from semester-to-semester or year-to-year in an effort to determine whether the influences on retention may vary over time. Intuitively, one suspects that sophomore year attrition may proceed from different sources than freshman year withdrawal, but neither our research nor our theories shed light on this issue. Thus far, we have only individual speculation to guide us.

Fifth, we do not yet understand the factors that lead to different forms of withdrawal. What sorts of student traits and institutional experiences lead some students to be stopouts, others to become transfers, and still others to dropout of postsecondary education in all its forms? Attempts to answer these questions will encounter substantial design and technical problems, but the questions are no less interesting or worthy of analysis.

Sixth, work by Gosman, Dandridge, Nettles and Thoeny (1983) and others have advanced our understanding of racially-based variations in retention, but most of these studies have been conducted with multicampus samples. Few individual colleges or universities can speak from knowledge and with confidence about how the experiences of their minority students differ from those of their nonminority students, and about how those differences might be related to attendance patterns.

Seventh, we are only beginning to understand the nature and extent of the influence exerted by financial matters on students' attendance patterns. Our lack of understanding in this area includes both the impact of public policy concerning federal and state financial aid programs, as well as the influence of institutional policies and practices in financial aid packaging for individual students.

Finally, we do not yet know much about what works or doesn't work in systematic and planned retention programs. What evaluations have been done (and they are not widespread) often lack rigor. We do know that the sources of attrition vary by campus, and such variations make the application of retention programs beyond a single and specific setting extremely difficult. Careful evaluation of local programs and practices is needed.

Why, after so many years of study, we continue to dwell in such relative darkness about why some students continue their enrollment while others withdraw? We are discovering that our present models are too global, tending to view the attrition/retention process as a set of dynamics common to all types of institutions. For example, while it is important to know that "academic and social integration," or "involvement" are central dynamics in the retention process, such abstract conceptions require us to deal with sets of variables, with conceptions that aggregate and obscure nearly as much as they reveal, rather than with more discrete variables that may be amenable both to systematic inquiry and to administrative action.

Our lack of detailed understanding is also attributable to our failure, until recently, to employ analytical procedures with the power and complexity to match our models (limited though the latter may be). More than fifteen years ago, Spady (1970, p. 77) urged that "with the more advanced multivariate statistical techniques and standardized computer programs now available, further atheoretical, bivariate research on the 'correlates' of dropping out should be abandoned. Now!" The use of causal modeling and multivariate statistical procedures has increased dramatically in recent years, but on too many campuses, analytical procedures continue to be limited to the visual inspection of frequency distributions, to chi-square tests of association, or to simple, bivariate correlations among a host of conceptually unrelated variables. Such unparsimonious fishing expeditions often produce statistically reliable findings, but also ones that challenge the interpretive ingenuity of the analyst and jeopardize the careers of administrators who place too much trust in them.

5. Where do we go from here?

Before we can come to grips with this question in a meaningful way, I believe we need to face at least two facts of higher educational life. First, no college or university—of whatever level or type—can be all things to all students. While that fact will surprise none of us, we seem either to disbelieve it, or, to ignore it, perhaps out of fear that our institution may lose critical enrollments, assuming, one must surmise, that we really can offer something of value to all comers. But consider, for example, that the vast majority of America's college students attend school within fifty miles of their homes. Except in large cities, that significantly reduces the number of institutions that a student might attend. The likelihood of finding an exceptionally strong course of study in the area of the student's interests is correspondingly reduced, and even if one is found, research indicates that about two-thirds of our students will change their academic major or career plans at least once during the first two years of college. The point, here, is that institutional perceptions that a wide variety of programs must be offered in order to meet student, community and state needs produces an internal pressure to provide something for everyone, with the unavoidable constraints on how many things can be done well. It seems reasonable to suggest that doing fewer things well may bear at least as much promise for increasing retention as doing many things in a mediocre fashion.

Second, we must recognize that there will be natural limits to what we can do as a system or as any individual institution can expect to do in the way of increasing retention. The relative invariance of the national retention rate over the last century gives mute prophesy of our prospects, as a nation, for changing things very much. Somewhat more improvement might be made on individual campuses, but we must not delude ourselves into expecting that increases in retention will be easy, sudden or dramatic. Not all students have the same ability, and even among students of similar ability, interest and motivation levels vary. Questions of what retention rates can and should be are intimately related to public policy questions dealing with education and schooling, with access and quality, with criteria and standards, with opportunity and achievement.

With this understanding of what some of the constraints are on our abilities to increase our knowledge of the dynamics of student retention or to retain students, let us turn now to next steps.

Theory and Research

If our understanding of the dynamics of student attendance behaviors is to increase, we must have better theoretical models. While current theories constitute significant conceptual advances over what preceded them, we are at a point, I believe, where our understanding will not progress significantly without new and refined models. The new models must recognize that the dynamics of attrition and retention probably vary both across and within institutional categories. For example, mounting evidence indicates that the influences on withdrawal in two-year institutions are quite different from those that operate in four-year institutions. And even within, say, four-year institutions, the patterns of influence appear to vary between commuter and residential campuses.

Similarly, new models must more clearly recognize that even within any single institution, student encounters with the institution are interactive—the same experience will have a differential effect on different kinds of students. For example, there is good reason to believe that the simple inclusion of race as a background variable in explanatory models of attrition and retention is not sufficient. Different models are needed.

Third, models are needed that can differentiate on the basis of attitudes and behaviors among academic dismissals, stopouts, transfers, and attainers. Our typologies, crude though they may be, are still more advanced than our empirical knowledge of what underlies them. Differentiation among these groups has important implications for institutional programs and policies intended to reduce these different forms of dropping out.

Finally, our present models do not take adequate account of the external world in which our students and institutions live. For example, projected enrollment drops did not materialize in many parts of the country in the early 1980s because the projection models made no allowance for improvements in the national economy that led to increased employment opportunities. And we know historically that college attendance rates are inversely related to employment rates: as the job market improves, college-going and retention rates decline. Similarly, present models make no allowance for federal, state or institutional financial aid policies and practices. While financial aid considerations may have their greatest impact on where one attends college, the cost, quality of program, and prospects for degree completion are decidely not independent of where one goes to college.

Thus, so far as our theories and research models are concerned, we need to give more attention to the development of targeted models of student retention, models that are specifically designed for specific configurations of institutional purpose and structure, as well as for certain groups of students within those institutions. The search for a unified theory that takes into account all of the various sources of attrition may be futile.

Increased understanding of the attrition/retention phenomenon also requires enhanced research designs and instruments, as well as employment of more sophisticated and powerful tools of statistical analysis. A critique of the research designs in common use is beyond the scope of this paper and is available elsewhere (see Pascarella, 1982). That same source includes an evaluation of alternative analytical approaches, as well as a discussion of relevant variables for study.

Administrative Practice

The research on attrition and retention suggests several lessons for administrators interested in increasing retention on their campus:

First, the first year is critical. If retention programs are to succeed, they must exert their influence during the first year, perhaps even in the first six-to-eight weeks. Primary

attention should be focused on admissions, on helping students choose the right institution in the first place (Tinto, 1986, p. 76); on an orientation, introducing new students to the intellectual life of the campus, as well as to the variety of support services and extracurricular life, and to an early introduction to faculty members as something other than the person at the front of the classroom; on academic advising, and on career planning. It is not too late to try to do something with second-year students, but by that time, perhaps as many as half of all students who will withdraw over a four- or five-year period will already have left.

Second, attrition and retention have campus-wide origins. Students pick up countless signals—implicit and explicit—about how their institution regards them, and the messages come from countless sources: secretaries and other staff, as well as from faculty members; from academic and social policies and regulation; from the presence or absence of opportunities to participate responsibly in the institution's decision-making; from the importance attached to intellectual curiosity and to intellectual and personal discovery. There is no single source of attrition.

Third, it follows from this that there is no single lever to pull to reduce attrition. Increasing retention rates will require a campus-wide response. Programs and efforts grounded in the belief that retention is the responsibility of a particular individual or organizational unit are unlikely to be effective. Organizational and coordinating responsibility may be assigned to a particular person or office, but increased retention must be an institutional goal, with responsibility shared by all. Successful retention efforts will require the interest and support of administrators at the highest institutional levels, and the efforts of individuals, whether faculty or staff, must be recognized through the institutions' reward structures, including promotions and merit-based salary increases.

Fourth, if the sources of attrition and retention are to be understood on any given campus, self-study is essential. The available research and theories can be useful in guiding study on one's campus, but for careful and wise planning, there is no substitute for carefully designed and executed, local research. Similarly, carefully designed evaluation of retention programs is required. We cannot continue to invest precious time and resources simply on the basis of a belief in the efficacy of our programs or efforts, or on the fact that the program seemed to work on another campus.

Fifth, effective retention programs include broad efforts to integrate or involve students in the life of the institution and the communities of people who comprise it. People, and the interactions among them, are critical. Programs that reach out to new students, that facilitate the establishment of personal bonds between and among students, faculty, and staff, bear greater promise for success than those that do not (Tinto, 1986). Institutions with high retention rates are characterized by a pervasive commitment to students and their educations and by the abundant opportunities they afford for students to affiliate with one another and with the institution and its faculty and staff.

Finally, and following from this, good retention is, in a fundamental sense, really just good education. The objective is not really to increase retention. That is but a subtask, and one that is likely to follow on successful performance of a more general and challenging task—raising the quality of the educational experiences of students and enhancing the quality of the academic and social programs and services designed to facilitate the educational process. If these things are attended to, it seems entirely reasonable to expect that retention will take care of itself.

REFERENCES

Astin, A.W. *Predicting academic performance in college: Selectivity Data for 2,300 American colleges.* New York: Free Press, 1971.

Astin, A.W. Student persistence: Some stay, some don't—why? *College and University*, 1973, *48*, 298-306.

Astin, A.W. *Preventing students from dropping out*. San Francisco: Jossey-Bass, 1975.

Bean, J.P., & Metzner, B.S. A conceptual model of nontraditional undergraduate student attrition. *Review of Educational Research*, 1985, *55*, 485-540.

Kiehle, F.E., III. *Postsecondary participation in the South: Developing interstate comparisons and identifying contributing factors*. Atlanta: Governor's Committee on Postsecondary Education. Undated.

Pascarella, E.T., Duby, P., & Iverson, B. A test and reconceptualization of a theoretical model of college withdrawal in a commuter institution setting. *Sociology of Education*, 1983, *56*, 88-100.

Spady, W.G. Dropouts from higher education: An interdisciplinary review and synthesis. *Interchange*, 1970, *1*, 64-85.

Riesman, D. *Constraint and variety in American education*. Lincoln: The University of Nebraska Press, 1956.

Tinto, V. Limits of theory and practice in student retention. *Journal of Higher Education*, 1982, *53*, 687-700.

Tinto, V. *Principles of effective retention*. Paper presented to the College Board Southern Regional Office and University of Southern Mississippi conference on "Enrollment Planning: A Total Institutional Approach." New Orleans, June 1986.

PREPARING STUDENTS FOR COLLEGE: PRIORITIES FOR PROGRESS

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Putting the Problem in Perspective

Today mounting evidence shows that as many as one-half of entering college students are unprepared for college-level work, under a reasonable definition of the term. A growing number of observers hold that this is unacceptable at this point in our nation's history and development. Those who have reviewed the historical data report that college graduation rates have been at 50 percent for decades. This suggests that as many as half of entering students may have long been unprepared for college. So, why is improved preparation more important now than it has been? The answer lies in demographic and economic trends and their impact on American social and material well-being. Smaller young cohorts are entering the educational pipeline with an increasing representation of disadvantaged minorities. Our economy continues its structural shift from an agricultural, mining, and manufacturing base to a service and trade base. The effective functioning of our democratic institutions, the enrichment of our diverse cultural heritage, and our material prosperity increasingly depend upon a well-educated citizenry.

Throughout our country it is a source of pride that any high school graduate can be admitted to some postsecondary education institution. More than half of high school seniors say they plan to attend college, but only a relatively small proportion are preparing for the 20 percent of colleges that have high and clear entry standards. Thus, most students who express interest in college may not be getting useful signals on how to prepare. Their high school schedule and performance do not suit their aspirations. Barely one-third are in programs that focus on essential academic preparation. Also, the performance of many students in the college preparatory curriculum is limited by the lack of clear college entry standards. As college entry standards are raised to more appropriate levels, large numbers of students will need stronger preparation.

Raising and Reformulating Entry Standards

High and clear entry standards enforced by colleges and universities will help motivate and guide student preparation. But, some methods used for raising standards—requiring higher standardized admissions test scores, higher grade point averages, and, most frequently, increasing the number of kind of required high school courses—have disadvantages limiting their effectiveness. Among the disadvantages are an inappropriate emphasis on grades, neglect of the variation in course content across schools, and lack of application to all postsecondary education sectors.

A more promising approach to raising entry standards is based on setting standards in terms of the skills needed to begin college, such as those developed for the College Board's Project EQ. If entry standards reformulated in this way are then communicated to high school students in messages they can relate to and at stages in their school careers when they still have time to correct weaknesses, then a much more effective set of guideposts to college preparation would exist.

This approach to raising standards creates much needed opportunities for college and school faculty to work together to develop more helpful and realistic statements of the reading, writing, and mathematics competencies needed to ensure adequate preparation for college.

Assessing College Preparation

Higher and better defined expectations will provide better guideposts for college

preparation and will move some students to improve their performance. But many other students will need additional guidance and motivation. These students must not only know what skills college work is going to demand of them, they need to know the progress they are making toward the expected skill levels.

Through an application of student achievement assessment, the new standards can be translated into practical performance terms providing specific goals that students must meet in preparing for college. Such assessments should, unlike many current "gate-keeping" assessments, indicate to individual students at various grades how they are doing in developing the specific skills needed in college. The assessments should be diagnostic and help students prepare for college.

Programs to Improve Preparation

Strengthening the preparation of students will require efforts by colleges and schools of a nature and of a magnitude not yet approached. The challenge through the rest of the century will be to reach and prepare larger numbers of students who are both economically and educationally disadvantaged. A much greater level of commitment will be needed to address the needs of this increasing group of students.

Programs are needed to address the motivational, practical, and educational needs of underdeveloped students. Providing such programs means many more people providing more attention to students during the high school and earlier years. The simplicity of this statement masks the difficulty of its implementation. Schools need a considerable amount of direct assistance. Therefore, many people need to be involved if the needs for additional preparation of half to three-quarters of the high school students are to be addressed.

Colleges and schools can work together in implementing tutoring programs, new courses and instructional approaches, such as Ohio's EMPT program, "across the curriculum" faculty development programs, two-plus-two programs, and mentoring programs. Many promising models are developing throughout the country. Through such efforts, the elusive goal of access with quality becomes more attainable.

REFERENCES

Cornett, Lynn M. *Improving Student Preparation: Higher Education and the Schools Working Together*. Atlanta, Georgia: Southern Regional Education Board, 1986.

Commission for Educational Quality. *Getting Students Ready for College: Why and How We Must Change What We Are Doing*. Atlanta, Georgia: Southern Regional Education Board, 1986.

Spence, David S. Academic Preparation and the Improvement of Undergraduate Education. Unpublished manuscript.

COLLEGE ENTRANCE REQUIREMENTS THAT MAKE SENSE

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Introduction

College entrance requirements have been stable for decades. In 1946, Fine (1946) noted that underlying policies governing admissions to undergraduate education varied, but a common thread ran through them all: graduation from an accredited high school, rank in graduating class, recommendation of principal or teachers, scholastic aptitude test or intelligence test, personal interview, character referrals, extracurricular activities, and the health record.

During the unprecedented growth in enrollment in higher education during the late 1950s through the mid-1960s, the selection of students for undergraduate admissions had centered mostly around objective and cognitive measures. These objective and cognitive measures were: high school rank, high school grade point average, and an acceptable score on a standardized test—the Scholastic Aptitude Test published by Educational Testing Service or the ACT published by the American College Testing Program of Iowa.

Beginning in the mid-1960s three major external forces begin to exert their influence on the character of undergraduate college enrollments: open admissions, demands to increase access, and the civil rights movement that called for radical changes in the race mixture of the student body in higher education. The results of these forces stimulated student diversity in college enrollments. More minorities and women were seeking places in American colleges and universities in unprecedented numbers. As a result, the diversity of the student body forced changes in academic policies, academic programs, and academic support systems. It was during this period that American higher education was asked by the public to embrace and maintain in the future a pluralistic society.

This was the period of great experimentation for higher education in America where the social and public policy of educational equity had emerged to provide new opportunities for participation by "new" and so-called "nontraditional" students in our institutions of higher learning in a traditional context. Meaning that while our institutions of higher education had begun somewhat reluctantly to admit more minorities and women, the decision for admissions was still based in the main on objective and cognitive measures that were inflexible and narrow.

After awhile and characteristic of American social and public policy, we as a nation began to swing away from the sharpened focus on educational equity to educational excellence. This major shift from educational equity to educational excellence has prompted some leaders at the institutional level and those at several statewide systems to increase the standards for entrance requirements to undergraduate programs.

Given these increases in standards for entrance requirements and based on my review of the literature concerning the changing focus from educational equity to educational excellence, it is my hope that we are witnessing not an "either/or" phenomena based on exclusion but rather an "and" phenomena based on inclusion of diversity in our student body as we design new social and public policies for higher education beyond the year 2000.

With this hope in mind, I further believe that the American nation cannot afford to promote educational excellence at the expense of education equity. If by chance or design our policies in higher education develop and maintain only objective and cognitive measures as entrance requirements for admissions to undergraduate programs, the

overall future quality of American higher education will be reduced.

To balance our pursuit for educational quality as a function of student body diversity in our undergraduate programs, it is imperative that for entrance requirements to make sense such that institution effectiveness in student retention is increased, admission decisions should be based upon the use of objective/subjective and cognitive and non-cognitive measures.

The New Entrance Requirements

A recent study by Goertz and Johnson (1985) published by the College Board found that 24 states now set minimum requirements for freshmen at all public institutions within their jurisdiction. Sixteen of these states have enacted, or are considering, more stringent entrance requirements (see Table 1).

These requirements include the use of one or more of the following requirements: a high school diploma, high school course requirements, minimum high school grade point average, high school class rank, standardized test scores, prediction of freshman grade averages, and a sliding scale based on high grade averages and standardized test scores (see Table 2).

There has been extensive discussion about inadequate academic preparation of students entering college today, yet only five states, California, Florida, Massachusetts, New Jersey, and Wisconsin, required a prescribed pattern of high school course work as an entrance requirement for their public colleges and universities in 1984-1985 (Goertz and Johnson, p.3). The State of Georgia will join this group of states in 1988 (see Table 3).

Currently statewide admission models most frequently incorporate three major criteria: high school rank, high school grade point average, and a standardized test score (see Table 4). In addition these criteria are used to develop two additional methods for admission: the sliding scale and predicted performance. Breland (1985) developed five statewide admissions models and assessed their impacts upon three racial groups.

By implementing more rigorous entrance requirements or standards, many educational leaders are concerned that the impact of such new requirements or standards will have profound impact on certain categories of students (Brizius and Cooper, 1984). These categories include students who will comprise a significant and increasing percentage of the undergraduate student body in the next few years. These students are those who may not have taken necessary courses in high school, older students, handicapped students, transfer students from community college, and disadvantaged students who may not have been able to complete courses while in high school. Policies requiring minimum high school grade point average or rank and those requiring minimum test scores are likely to have a differential impact on minority students.

A Limited Review of Predictive Validity of Objective and Cognitive Measure That Are Used in Entrance Requirements

Validity refers to the usefulness of a measure or a judgment. Most commonly, a procedure is considered useful if it predicts some outcome of importance—as college grades are predicted by high school grades (Breland, 1981). What is the predictive validity of the most commonly used objective and cognitive measures such as high school work, high school grade point average, and scholastic aptitude test for specific categories of students?

Breland (1979) pointed out that for "Anglo populations," the high school record usually yields slightly higher predictive correlations. For black populations, however, the data suggest no consistent superiority of the high school records as a prediction of college performance. The amount of data available for Mexican American or Chicano samples

TABLE 1
Use Of Statewide Standards, 1984-85

State	Statewide Standards, No Institutional Discretion	Minimum Statewide Standards, Institutional Discretion	No Statewide Standards
*Alabama			X
Alaska			X
Arizona		X	
*Arkansas			X
California	X		
Colorado			X
Connecticut			X
Delaware			X
*Florida		X	
*Georgia		X	
Hawaii			X
Idaho	X		
Illinois			X
Indiana			X
Iowa	X		
Kansas	X		
*Kentucky		X	
*Louisiana	X		
Maine			X
*Maryland		X	
Massachusetts		X	
Michigan			X
Minnesota			X
*Mississippi		X	
Missouri			X
Montana	X		
Nebraska	X		
Nevada	X		
New Hampshire			X
New Jersey		X	
New Mexico			X
New York			X
*North Carolina			X
North Dakota	X		
Ohio		X	
Oklahoma	X		
Oregon	X		
Pennsylvania			X
Rhode Island			X
*South Carolina			X
South Dakota	X		
*Tennessee			X
*Texas			X
Utah			X
Vermont			X
*Virginia			X
Washington			X
*West Virginia		X	
Wisconsin		X	
Wyoming	X		
TOTALS	13	11	26

Source: Goetz, M. and Johnson, L. *State Policies for Admission to Higher Education.* No. 85-1, ETS RR No. 85-26. New York, 1985.

*Southern Regional Education Board States

TABLE 2

Type of Statewide Admission Standard In Use, 1984-85

State	High School Diploma Only	High School Course Require.	Min. GPA	Class Rank	Test Scores	Predict. Perform.	Sliding Scale
Arizona			X	or X	or X		
California		X					X
*Florida		X	X		X		
*Georgia		X	or		X		
Idaho	X						
Iowa				X			
Kansas	X	X[a]					
*Kentucky	X						
*Louisiana	X						
*Maryland			X				
Massachusetts		X					
*Mississippi					X		
Montana	X	X[a]					
Nebraska	X						
Nevada			X				
New Jersey		X					
North Dakota	X						
Ohio	X	X					
Oklahoma			X	or X	or X		
Oregon			X	or	X	or X	
South Dakota				X			
*West Virginia			X	or	X		
Wisconsin		X					
Wyoming	X						

Source: Goetz, M. and Johnson, L. *State Policies for Admission to Higher Education*. No. 85-1, ETS RR No. 85-26. New York, 1985.

*Southern Regional Education Board States.

TABLE 3

Summary Table for Five Models of Statewide Admissions Policies
(Data from National Samples)

	MODELS/MINIMUMS	Percentage (%) Eligible By Group blacks	hispanics	whites	Differential Impact (%) blacks	hispanics
1.	Single Index					
	Rank in top 2/5	56	64	71	12	7
	GPA = 2.75	52	65	72	20	7
	SAT = 800	27	43	73	48	30
2.	Multiple Index					
	Top 2/5 and SAT = 500	56	65	72	10	7
	Top 2/5 and SAT = 600	46	50	71	25	12
	Top 2.50 and SAT = 700	37	55	77	40	22
	Top 3/5 and SAT = 800	27	43	72	40	29
	GPA > 2.5	26	42	72	40	30
3.	Either-Or Model					
	Top 2/5 or SAT = 1100	60	67	74	15	7
	Top 2/5 or SAT = 1000	60	66	76	16	8
	GPA = 3.0 or SAT = 900	43	61	73	30	12
	Top 1/5 or SAT = 800	45	57	75	30	22
4.	Sliding Scale Model	45	59	75	29	16
5.	Predicted Performance Model					
	Sample Inst. A	40	60	72	32	12
	Sample Inst. B	37	58	72	35	14

Source: Excerpted from Breland M. *An Examination of State University and College Admissions Policies*. Research Report 85-3. Princeton, NJ; Educational Testing Service, 1985.

TABLE 4

Changes in Statewide Admission Standards, 1982-1985

State	None Anticipated	H.S. Crse. Req.	Min. GPA	Test Score
Arizona		X		
California		X		
*Florida		X		X
Georgia	X			
Idaho		X[a]		
Iowa	X			
Kansas	X			
*Kentucky		X		
*Louisiana	X			
Maryland	X			
Massachusetts		X		
*Mississippi		X		
Montana	X			
Nebraska		X		
Nevada		X		
New Jersey		X		
*North Carolina		X		
North Dakota	X			
Ohio	X			
*Oklahoma		X		
South Dakota		X[a]		
*West Virginia		X		
Wisconsin	X			
Wyoming	X			

Source: Goetz, M. and Johnson, L. *State Policies for Admission to Higher Education*. No. 85-1, ETS RR No. 85-26: New York, 1985.

*Southern Regional Education Board States

[a]Proposed

TABLE 5

Comparative Differences in Student Academic Preparedness Based on High School Course Requirements as Established by The Board of Regents of the University System of Georgia for Fall 1988

	1984 Enrollment		1986 Applicants	
	Sample of Freshmen	All Black Freshmen	Sample of Freshmen	All Black Freshmen
N	141.0	167.0	182.0	109.0
LOR	118.0 (84%)	156.0 (93.4%)	87.0 (47%)	68.0 (62%)
Diff.	(9%)		(15%)	
HSA	2.73	2.87	2.74	2.97
SATV	394.0	349.0	432.0	396.0
DATM	437.0	380.0	465.0	426.0
TSAT	831.0	729.0	897.0	822.0
PFAG	2.05	1.87	2.28	2.32
MR	9(PFAG 1.97 CCGPA 2.14	9(PFAG 2.17 CCGPA 2.33	--	--
DMR	65(PFAG 2.04 CCGPA 2.20	89(PFAG 2.05 CCGPA 2.15	--	--
Ret %	(52%)	(59%)	--	--

N = Number, LOR = Least one requirement not met, HSA = High School Average, SATV = SAT Verbal, SATM = SAT Mathematics, TSAT = Combined SATV&M Scores, PFAG = Predicted Freshman Average, CCGAP = Cumulative College Grade Point Average (after one year), MR = Met High School Requirements, DMR = Did not meet at least one requirement, Ret % = Retention Percentage (after one year).

was not sufficient for any generalizations about predictive correlations, but the magnitude of those correlations available were on the average lower than those for Anglo populations.

Data from a number of other studies reviewed by Breland (1979) showed that the college performance of black populations, male and female, have been consistently overpredicted by the traditional academic predictions—the high school record and standardized test scores—when predictions are based on data from white or predominantly white samples. The high school record appears, from these studies reviewed, to be the principal source of this overprediction. Standardized test scores also have tended to overpredict college performance of black populations, but a combination of the high school record and the test scores appears to minimize overprediction. In contrast, these studies showed that women are consistently underpredicted by traditional predictors when predictions are based on data from male or predominantly male samples. As a result, it is probable that institutional effectiveness regarding student retention programs could be jeopardized because the nature of the academic performance given a diverse student-mix in the entering freshman class may not at onset signal the need for increased academic support services.

Hand and Prather (1985) investigated the predictive validity of the Scholastic Aptitude Test for members of different gender and minority status groups. The findings provided some support that college grade point averages are less predictable for black males using the SAT-Verbal scores and the high school average.

Frank and Jeffery (1978) conducted a study that assessed some impacts of freshman admissions formulas on regularly admitted freshmen at Berkeley in the fall of 1972 and 1973. The results showed that:

1. For both classes (1972 and 1973), the level of HSGPA is only weakly related to whether a student graduates or not. The test scores have no usable, direct relationship as a general prediction of graduation.

2. Neither the new admissions formula nor the original one predicts graduation better than HSGPA. In fact, frequently they do worse.

3. The formulas would have excluded slightly more blacks and Chicanos than whites and Asians.

4. Students made ineligible by the formulas graduated at a rate only slightly lower than the rest.

5. Use of the formula results in a net loss in the enrollment of women and minorities.

Nettles, Thoeny and Gosman (1986) collected and analyzed data that was supportive of the validity of traditional admissions criteria high school grades and SAT scores—for both black and white students. However, SAT scores, while valid, appear not to be as strong a predictor for black students as they are for white students' cumulative college grade point average. Additionally, they concluded that several student personal and attitudinal/behavioral characteristics contributed far too much to the prediction of cumulative college grade point averages to be ignored in the admissions process. Therefore, they recommended that colleges and universities should include consideration of both nonintellectual and intellectual factors in college entrance requirements.

A Limited Review of Noncognitive Variables in Predicting Academic Success

Those who advocate the use of nontraditional predictors of college performance, employing noncognitive variables, suggest that a student's potential college achievement should not be predicted solely on the basis of their performance on college entrance tests, but rather on the basis of a variety of student

characteristics (Nettles, Thoeny, Gosman, 1986). Clark and Plotkin (1964) discovered that for black students entering predominantly white universities, success in college was dependent upon their motivation and goals regardless of their precollegiate performance or entrance examination indices. Other researchers, such as Sedlacek and Brooks (1968), Gibbs (1973), and Pruitt (1973) recommended that for black students such measures as educational aspirations, motivation, precollegiate preparation and experiences, and social and academic support be used as alternative college admissions criteria to traditional standardized tests, high school rank, and high school grade point average.

However, concurrent with these efforts other researchers were maintaining the traditional view of using the objective and cognitive test for college entrance requirements. Thomas and Stanley (1969) reported the results of correlational analyses which showed that aptitude tests are better predictors of the college performance of black students than high school grades. Studies conducted by Stanley and Porter (1967) and Cleary (1968) found no significant racial differences in the value of standardized entrance tests and other precollegiate academic characteristics (i.e., high school grades and rank) as predictors of college performance.

With these findings by researchers that hold traditional views, let's examine some of the noncognitive research studies a bit closer. On predicting academic success by race using noncognitive variables, Tracey and Sedlacek (1982) using the noncognitive questionnaire collected and analyzed data that showed for whites the noncognitive dimensions of self-confidence, preference for long-range goals over short-term goals or immediate needs, and realistic self-appraisal were most strongly related to college grade point average. For blacks, the only noncognitive variables that were related to grade point average were positive self-concept and realistic self-appraisal. For whites the noncognitive questionnaire significantly adds to the prediction of grades, while for blacks it is related to both grades and enrollment status.

Another study was conducted by Tracey and Sedlacek (1984) concerning the relationship of noncognitive variables to academic success by race over four years. In this study random samples of 1979 and 1980 entering freshmen were given the Noncognitive Questionnaire (NCQ), designed to assess seven noncognitive dimensions associated with minority student academic success. The predictive validity of the NCQ for each race was determined with respect to cumulative grade point average and persistence at several time periods over four years. With respect to GPA, the NCQ was found to be highly predictive at all points over four years for both white and black students. Rogers (1984) studied the use of noncognitive variables in the prediction of black freshmen's academic performance at a large southern land-grant predominantly white state university. The significant NCQ items differed for males and females. Showing pride in leadership activities, not getting easily discouraged, and expecting to have a difficult time at college were three noncognitive items that predicted black males college GPA. For black females, the most important noncognitive variable was having support from friends and relatives to attend college.

The noncognitive studies that we just discovered were all conducted in large predominantly white universities. If we shift the environment to predominantly black colleges and universities, what are the results of noncognitive studies conducted in these organizational settings? Pratt (1984) used noncognitive variables to predict academic retention among population subgroups. Data were collected on race, sex, retention status, SAT scores, high school class rank, and noncognitive data, including motivation (e.g., extent of studying, activities, satisfaction with grades). High multiple correlations between retention status and various combinations of predictors were found for remedial students four of the five years after entry and for males as

opposed to females in the fourth and fifth years after matriculation. The Institute for Services to Education (1979) study indicated that ACT-C scores underpredicted the GPA of black students. Two of the seven nontraditional measures were associated with cumulative GPA, highest expected degree, and plans after graduation.

The Minimum Requirements For Regular Admissions to the University System of Georgia Institutions Fall Quarter 1988: A Case Study

In a publication prepared and published by the University System of Georgia (1985), the Board of Regents established minimum standards for admission to a member institution of the system. The minimum standards reflected a pattern of high school courses. The established minimum standards are: English-4 units, mathematics-3 units, science-3 units (2 laboratory sciences and one nonlaboratory science), social science-3 units, and 2 units of foreign language.

In this publication it was stated that, "To succeed in college, students must have strong academic preparation in high school." The Board of Regents, which governs the University System of Georgia believes that success in selected high school courses contributes immeasurably to a student's success in college.

During the late winter, early spring of 1986, through a colleague from the University of Georgia, I became interested in the impact of new standards for fall 1988 as adopted by the Board of Regents of the University System of Georgia and the progress that high school students were making by taking the appropriate high school courses as determined by the Board of Regents in order to meet the minimum requirements for regular admission.

Two different samples of students were selected for this limited analysis. One sample of enrolled students was selected from 1984 and a second sample of students was selected in 1986. The 1984 sample was a 10 percent sample of all freshmen that enrolled in the college during the fall quarter 1984 and all black freshman students who enrolled during that quarter was selected as a sample. The number of students in the 10 percent sample was 141 and the total number of black freshmen was 167.

Based on the minimum standard for high school course requirements as established by the Board of Regents; 84 percent or 118 out of 141 did not meet at least one requirement. For black freshmen, 93.4 percent did not meet at least one requirement or 156 out of 167.

However, when you repeat the sample for 1986, the 10 percent sample of all freshman applicants represented 182 students and of that total only 87 or 47 percent did not meet at least one requirement. This is substantial progress in a two year period for a 10 percent sample of all freshmen who made application to the college. One hundred and nine (109) black freshman applicants revealed that 68 out of 109 or 62 percent did not meet at least one of the requirements. This is a reduction but it is not as low as the 10 percent sample. This might lead one to speculate that the black freshmen who planned to enter the fall quarter 1986 were less prepared than the students in the 10 percent sample.

The predicted freshman average grade for 1984 as used by this college was PFAG = .0019 SATV + .0008 SATM + .6743 AHSA - .8755 (a constant) with a standard error of approximately 0.61.

In a comparison of the predicted freshman average grade with the cumulative college grade point averages for this 10 percent sample of all freshmen and all black freshmen, interesting results are revealed (See Table 5). For the 10 percent sample with an N=141; only 74 or 52 percent were still enrolled after one year. The group had a PFAG of 2.05. The nine who met the high school course requirements had a PFAG of 1.97 and

after one year of college had earned a cumulative grade point average of 2.14; whereas the 65 who did not meet at least one high school course requirement had a PFAG of 2.04 and a cumulative grade point average of 2.20 at the end of their freshman year. This unexpected result is probably due to the difference in the numbers of those who met the requirements and those who did not meet at least one course requirement.

For the total number, 167 black freshmen, 98 or 59 percent were still enrolled after one year. The group had a PFAG of 1.87. Nine who met the requirements had a PFAG of 2.17 and at the end of their freshman year their cumulative grade point average was 2.33; whereas, 89 who did not meet at least one high school requirement had a PFAG of 2.05 and posted, after one year, a college cumulative grade point average of 2.15.

Let's review the fact that 84 percent of the 10 percent sample of all enrolled students did not meet at least one high school course requirement. Ninety-three percent of all entering black freshmen did not meet at least one of the high school requirements; this limited data suggests that black students who met the high school course requirements, posted an academic performance that was significantly higher (2.33) than their PFAG (2.17). In addition, these black freshmen out performed those in the 10 percent sample who met all of the high school course requirements (2.14 vs 2.33). These data are too limited to draw conclusions or make generalizations; but it could point the way for further research on minimum standards using high school course requirements for college entrance. In addition, the black freshmen had a higher retention rate than the 10 percent sample (52% vs 59%). Again, there is opportunity to ascertain why the difference in retention percentages between the two groups.

But what happened to the 48 percent of the 10 percent sample that left before the end of their freshman year and the 41 percent of the black freshmen who did not complete their freshman year of studies. I for one do not believe that we can afford to risk losing this potential and productive talent. It is my opinion that the admission process, and the academic support system on a campus must become interlinked if we are to improve upon institutional retention percentages.

It is quite possible, that while the traditional predictor variables for both groups across this sample and within groups were significant, different students were still able to succeed academically. But what concerns me is that traditional predictor variables for some subpopulations on campus have under- or over-predict academic performance and do not provide additional nonintellective data and information about students that might face academic difficulties for nonintellectual reasons.

College Entrance Requirements That Make Sense

It is my belief that equity and quality goals can be met at the same time for a diverse student body if institutions of higher learning and systems begin to develop entrance requirements that benefit the student and the institution. Until recently institutions took pride in the number of students who did not complete their undergraduate studies or who did not graduate. As you recall the eye of the "free speech movement storm" at Berkeley in the mid-1960s centered around the notion that students were not benefiting from their education.

As student consumerism increases, as the percentage of "new" and "nontraditional" students seek educational opportunities, as more disabled students enroll in college, as more adults return to college, and as more minority students seek to fulfill their academic goals and human potential, it is imperative that colleges and universities broaden their entrance requirements to include both cognitive and noncognitive measures; that when combined will improve the prediction of the academic success for a diverse student population.

There needs to come a day when the American College Testing Program and the Educational Testing Service look to the future and ascertain that there is a need to combine the ACT or SAT scores with the noncognitive prediction variables as developed by Sedlacek and others for the purpose of predicting academic success for a diverse student body.

But most importantly, information gathered from noncognitive instruments that have shown to have significant predictive validity for academic performance for selected groups should be used in some cases to supplant the cognitive measures of the ACT or SAT. However, the information gained from noncognitive measures should be used to increase institutional retention and assist the student in reaching academic and personal goals.

In addition, I believe the University System of Georgia has an opportunity to explore the impact of high school course requirements on collegiate academic performance. It is too early to determine what will be the result of this minimum requirement of students. Whatever the impact, I plead that institutions of the University System of Georgia combine noncognitive measures with cognitive measures to predict academic performance for "new" and "nontraditional" students.

REFERENCES

Board of Regents. *Preparing for College: Essential Courses and Skills*. Atlanta: University System of Georgia, 1985.

Breland, H. *An Examination of State University and College Admission Policies*. Research Report 85-3, 1985. Princeton, NJ: Educational Testing Service.

Breland, H. *Assessing Student Characteristics in Admissions to Higher Education: A Review of Procedures*. Research Monograph No. 9, 1981. New York: College Entrance Examination Board.

Breland, H. *Population Validity and College Entrance Measures*. Research Monograph No. 8, 1979. New York: College Entrance Examination Board.

Brizius, M. and Cooper, H. *A Joining of Hands: State Policies and Programs to Improve High School-College Linkages*. Report of the State Education Research Center of the Council of Chief State School Officers and The National Association of State Boards of Education, 1984. Alexandria, VA: NASBE.

Clark, K.B., and Plotkin, L. *The Negro Student at Integrated Colleges*. New York: National Scholarship Service and Fund for Negro Students, 1964.

Cleary, A.T. Test Bias: Prediction of grades of Negro and white students in integrated colleges. *Journal of Educational Measurement*, 1968, *5*, 115-124.

Fine, B. *Admission to American Colleges*. New York: Harper and Brothers, 1946.

Frank, A.C. and Jeffrey, K.M. *Freshman Admissions by Formula: A Retrospective Study of Impact on Student Mix and Graduation Rates at Berkeley*. Ed 192-675, 1978. Berkeley: Office of Student Affairs, University of California.

Gibbs, J.L. Black students/white university: Different expectations. *Personnel and Guidance Journal*, 1973, *51*, 463-469.

Goertz, M.E. and Johnson, L.M. *State Policies for Admission to Higher Education*. Report 85-1, 1985. New York: College Board.

Hand, C.A. and Prather, J.E. *The Predictive Validity of the Scholastic Aptitude Test Scores for Minority College Students*. Paper presented at meeting of the American Educational Research Association, April 1985, Chicago, IL.

Nettles, M.T., Thoeny, A.R., and Gosman, E.J. Comparative and predictive analyses of black and white student's college achievement and experiences. *Journal of Higher Education*. 1986, *57*, 289-318.

Pratt, L.K. and Gentleman, K.M. *Predicting Academic Retention Among Population Subgroups: The Use of Noncognitive Predictors*. Paper presented at the forum of the Association for Institutional Research, May 1984, Fort Worth, TX.

Priutt, A.S. Minority admissions to large universities: A response. *Journal of College Student Personnel*., 1973, *14*, 22-24.

Rogers, B.H. *The Use of Noncognitive Variables in the Prediction of Black Freshmen's Academic Performance*. Paper presented at the meeting of Southern Association for Institutional Research, October 1984, Little Rock, AR.

Sedlacek, W.E., Brooks, G.C., and Mindus, L.A. Black and other minority admissions to large universities: Three-year national trends. *Journal of College Student Personnel*, 1968, *9*, 177-179.

Stanley, J.C., and Porter, A.C. Correlation of SAT scores with college grades for Negroes versus whites. *Journal of Educational Measurement*, 1967, *4*, 199-218.

The Institute for Services to Education. *Predicting the Academic Success of Black Students Attending the Historically Black Colleges--Part 2*. Washington, D.C.: 1979.

Thomas, C.L., and Stanley, J.C. Effectiveness of high school grades for predicting college grades of black students: A review and discussion. *Journal of Educational Measurement*, 1969, *6*, 203-216.

Tracey, T.J. and Sedlacek, W.E. *Noncognitive Variables in Predicting Academic Success by Race*. Paper presented at the meeting of the American Educational Research Association, March 1982, New York.

Tracey, T.J. and Sedlacek, W.E. *The Relationship of Noncognitive Variables to Academic Success by Race over Four Years*. College Park: Counseling Center, University of Maryland, 1984.

IS THERE A SPECIAL NATURE TO STUDENT RETENTION IN POSTSECONDARY TECHNICAL EDUCATION INSTITUTIONS?

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Regarding the nature of postsecondary technical education retention, there are specific questions to be answered which are unlike those in traditional postsecondary institutions. One of the basic questions asked in a college or university is: of those new freshmen who enroll in the fall, how many return for their sophomore year? Given the nature of one- and two-year programs in a technical institution, a similar answer would be sought by a somewhat different question: of those students who enroll in a full-time program of study, how many return (full-time) each succeeding quarter? Questions asked in traditional institutions of higher education which examine the retention rate center around progress towards a degree. However, in postsecondary technical institutions, the questions should focus upon how many students continue to return until they receive and take an opportunity for employment.

The point is that, unlike colleges or universities where the ultimate goal is assumed to be obtaining a degree, in technical institutions the primary goal is to move quickly into the job market. The stated purpose of most technical institutions is to provide the training and education which leads to the competencies and skills that are desired by employers for immediate employment. Therefore, it is feasible that students in search of employment in a particular field may pursue education and training until opportunities develop for entering the job market. At this point students may be lured away from completing a program into taking a job that becomes available. This changes the complexity of factors purposed by theories of retention at the postsecondary level of education.

Information With Implications for the Nature of Retention/Attrition Within Technical Institutions

Tinto's (1975) efforts to identify the salient variables impacting dropout decisions led to constructing a model of the interaction among these variables. In brief, the model illustrates individual background variables which impact goal and institutional commitments. These then influence the academic and social systems. Thus, both academic and social integration influence dropout decisions in a traditional setting (i.e. typically 18- to 22-year-old student body on a residential campus). Fox (1986) tested the major constructs of Tinto's model in a study of retention of economically and academically disadvantaged students at an urban, nonresident university. Academic integration was found to be the most important factor with social integration having little effect. For underprepared students, the development of academic skills and behaviors was seen as critical in terms of their retention.

Pascarella, Duby, and Iverson (1983) tested Tinto's model for commuter institutions and refined the model as a result of the differences in commuter students. Their data suggested two main differences. Students at commuter institutions do not seem to require the high degree of social integration as their residential counterparts. Students at commuter campuses who have high needs for social integration tend to transfer to the more traditional schools. Commuter students who persisted did have high needs for academic integration. The authors concluded that "in nonresidential institutions commitment to the

institution. . . is defined largely by successful and personally satisfying interactions with the academic rather than the social systems of the institution." (p. 92) Another major difference which Pascarella, et al., noted is the introduction of a new, important variable for explaining persistence: intention. This variable had the strongest direct effect on persistence/withdrawal. The "intent to persist" was found to be a good predictive indicator of persistence. Students who are transitory residents of an area, or who are interested in a few courses only, are common to commuter schools. Thus, these students have little intent to stay until they complete a degree and should be considered as inflationary to attrition statistics.

Bean and Metzner (1985) have developed a conceptual model of nontraditional undergraduate student attrition. The major difference between the attrition process of traditional and nontraditional students is that nontraditional students are more affected by the external environment and academic integration rather than by social integration. Pascarella and Chapman (1983) have already stressed these differences in multi-institutional studies between residential and commuter institutions. When academic and environmental factors are good, a nontraditional student is likely to persist. When the academic factors are good, but the environmental factors are not, then this student is more likely to drop out. Thus, for the nontraditional student, the external environment or support system has a greater bearing on persistence than academic integration and academic integration is more influencial than social integration.

Different types of institutions have higher attrition rates. In the 1984 session of this conference, John Smart reported that predominantly commuter colleges (both two- and four-year) generally have the highest dropout rate. This is often attributed to the difficulty of establishing programs and services which could promote the social integration of largely part-time and commuting students. Could it also be attributable to these students either obtaining employment or a promotion within their current occupation?

Questions to Raise and Dilemnas to Study

The dominating motivation factor for enrolling in a two-year technical institution is that of obtaining employment, thus the primary research question to resolve should be: of those who do leave prior to graduation, how many do so in order to accept jobs? Do these students return at a later date? These questions should be answered accordingly by each program of study. However, prior to searching for answers to these questions, there should be some thought given to the establishment of a systematic data base which can capture student data from the time contact is made in the application process. One aspect of the application process that may be overlooked in technical schools and is rarely considered in college application procedures is the student's intent-to-persist in a program of study. Students often apply to a technical school in hopes that the training will lead to a job in the near future. If prior to being admitted or entering the school they receive an opportunity for employment which meets their immediate needs for financial security, this may delay their pursuit of educational goals.

There may be new factors to add to Tinto's (1975) model when applied to nontraditional institutions. These may adjust the original orientation from being primarily an academic and a social phenomena to one of financial needs experienced by the student. The most recent student orientation survey at Athens Tech indicates a major reason students choose to come for a technical education as facilitating their acquisition of employment. The issue of value-added education becomes important if these students leave as soon as an employment opportunity arises. Included in a data base system for retention study should be follow-up questionnaires administered immediately upon a student's withdrawal or absence in a quarter following a previous term of enrollment.

The components for a potential pre- and post-evaluation of value-added education are partially in place at Athens Tech since a comprehensive aptitude test is a requirement for entrance into full time programs. The Career Planning Program (CPP) is used to assess an individual's readiness for a program of study. However, it would be necessary for a follow-up to be more than just a retest using the CPP. This follow-up could be a major component and used as a means for exiting the program by having students take a final or comprehensive examination to ascertain the level of competency acquired in the particular skill or occupation.

In addition, it would be worthwhile to study the use of standardized tests of general competency such as the COMP developed by ACT. These tests are employed by Northeastern Missouri State University whose programs of value-added assessment have been nationally acclaimed. Concerning the value-added by short term, temporary, or consumer interest courses offered primarily at night, the pre- and post-examination would have to be tailored to each course. If a series of short term courses are involved (such as the PC Users Specialist Certificate), then it would be necessary to identify that specialty in an assessment of pre- and post-skills. This could be done by using a standardized test or a specially developed inventory administered to assess the contribution made by the institution to the student's development.

In conclusion, there does appear to be a special nature to the retention of students in postsecondary technical education institutions. To define and enhance student retention regardless of institution type always requires some special efforts. In a technical education institution the following should influence these efforts:

1. How does "intent to stay" and "purpose of attendance" correlate with immediacy of employment among leavers? Does this justify establishing a new category in the study of retention/attrition—attainers?

2. Strategically use admission procedure to enhance retention (i.e., request a commitment to persist to program completion and seek information regarding current need for employment).

3. Facilitate data capturing with exit interviews via the Registrar's office when leaving prior to program completion.

4. Maintain a computerized retention file to provide timely feedback to each department and to track students through the quarter as well as quarter to quarter.

REFERENCES

Bean, J. P. and Metner, B. S. A Conceptual Model of Nontraditional Undergraduate Student Attrition. *Review of Educational Research*, 1985, *55*, 485-540.

Fox, R. N. Application of a Conceptual Model of College Withdrawal to Disadvantaged Students. *American Educational Research Journal*, 1985, *23*, 415-424.

Pascarella, E. T., and Chapman. A Multi-Institutional, Path Analytic Validation of Tinto's Model of College Withdrawal. *American Educational Research Journal*, 1983, *20*, 87-102.

Pascarella, E. T., Duby, P. T., and Iverson, B. K. A Test and Reconceptualization of a Theoretical Model of College Withdrawal in a Commuter Institution Setting. *Sociology of Education*, 1983, *56*, 88-100.

Smart, J. C. Research Uses in Administration: Enhancing Student Retention, Growth and Development. *Proceedings of the 1984 Conference, Higher Education in Georgia: Research Needs and Uses in Administration*. Athens: University of Georgia, Office of Institutional Research and Planning, 1985.

Tinto, V. Dropout from Higher Education: A Theoretical Synthesis of Recent Research. *Review of Educational Research*, 1975, *45*, 89-125.

THE SPECIAL PROBLEMS OF RETAINING TECHNICAL STUDENTS

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Technical schools have unique problems in retaining students in one- and two-year specialized programs of study. A profile of the typical technical student will be presented followed by attrition facts and suggestions for managing attrition.

According to new student surveys in two technical schools, the typical technical school students have been in the work force for more than one year before deciding to further their education. About 68 percent of new students have been out of high school for two years or more. About 29 percent have been to college for some length of time. In fact, 70 percent say they considered colleges in the area when choosing the technical school.

More than half of all technical students work and attend school. Also, the majority of students attend classes on a part-time basis. For the past few years, evening enrollment has exceeded day enrollment. In addition, 60 percent of diploma-seeking students are receiving some type of financial aid.

A three-year study shows that one technical school loses 40 percent of students before graduation. The most often cited reasons are class and work schedule conflicts, financial problems, childcare problems, lack of basic skills, and relocation.

Faculty and staff at Savannah Tech see a real need to manage attrition. Employers rely on the school to fill many skilled jobs. At present, job openings are coming in faster than can be filled with trained technicians. Also, in order to attract new business and industry, a steady supply of technicians must be trained in the region. The Chamber of Commerce and Port Authority look to Savannah Tech to help bring in new industry and, therefore, strengthen the local and state economy. More jobs will also help fight the poverty problems in the area.

In order to keep students in school, several programs or procedures have been implemented and found helpful. An early intervention system to refer students for counseling is initiated through instructors and monitored by the school's highest official. A peer-tutoring program has aided many students who lacked academic preparation. Remedial math and reading are now offered 11 hours daily, are free of charge, and are open to anyone at least 16 years of age or over. Also, scholarships and an emergency loan program have been initiated by Savannah Tech's Foundation and by a local civic club. Flexible scheduling, evening class expansion, and the encouragement of part-time enrollment help those students with scheduling problems. A task force has been working to further study the problems of retention.

To date there remain many unanswered questions: Is the school's attendance policy (designed to stimulate workplace expectations) too rigid? Can admission requirements actually work to predict successful program completion? Should students who leave after short periods of training and go to work in their fields of study be considered positive placements?

The most important question of all in the retention of students is one that must be asked daily by all school staff: How can we be more caring and inviting as a school? The answers must be found through effective action on everyone's part.

PROBLEMS IN DEFINING VOCATIONAL-TECHNICAL RETENTION STATEWIDE

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The purpose of this paper is to examine some of the difficulties that exist in defining retention in Georgia's postsecondary vocational-technical schools. The problems will be divided into two general categories, which I will call mechanical problems and value-related problems. Some current figures on retention in the tech schools will be examined in order to illustrate these problems. Finally, I will look into the future and discuss what I see coming that will affect these problems. It should be remembered as I discuss these topics that I am presenting my own professional opinions. Nothing that I say should be taken as an official position of the State Board of Postsecondary Vocational Education.

Current Problems

As I stated above, I see the problems in determining retention rates for Georgia's postsecondary technical schools as falling into two general categories, mechanical problems and value-related problems.

Mechanical problems are those that result from our current methods of counting students and accessing the records that are maintained. Georgia has an automated vocational student information system operated by the Office of Vocational Education of the State Department of Education. The system's major weaknesses are that it is not interactive, is not based on any database management system software, and is not school-based. It is important to note that these weaknesses largely reflect the fact that the system is about eight years old and therefore is technically out-of-date, rather than there necessarily being inadequacies in the original design of the system.

Under this system the schools submit student data cards to four geographic centers, where the data are entered and then forwarded to the proper functional center. As far as data relating to retention are concerned, one center handles all enrollment data statewide, and another handles student exit (completion and placement) data statewide. At these functional centers, the school data files are loaded into master statewide COBOL data files and are accessed via custom-written COBOL programs. Each master file is an annual file, thus making the ideal of tracking of individual students across years very difficult.

Nonetheless, the system is fairly serviceable for retention studies because of the traditional emphasis of vocational education on placement of students after training. Thus, for any given year all the persons exiting the school are identified and, in most cases, the reason obtained. As a result, at the end of a year we know the number of students served, the number still in school, and the number that exited. For those exiting, we know whether they graduated or not and, if not, why. We also know their placement status, both for graduates and for most nongraduates. Actually, the system is more complex than I just described and some of these complexities add difficulties to accurately determining retention; however, in general, a relatively good measure of retention can be obtained.

The second category of problems in defining retention in the technical schools is what I call the value-related problems. I would suggest that, to be meaningful, retention must be defined in terms that correspond to the purpose of an institution. In colleges, traditionally the ultimate purpose has been granting the student a degree. Therefore, a student has been "retained" if he or she receives a degree. Vocational-technical education has a different tradition. Its purpose has

been to meet the training needs of business and industry and to enable persons to become productive members of the work force. That purpose is not necessarily tied to a formal award but instead to the result of the training. As a result, if a person leaves school to take a job in a field related to his or her training, the school's purpose has been fulfilled, even if the student did not graduate. In fact, it has not been unusual for employers to be encouraged to "raid" the classroom for employees, and the curriculum has often been designed to make such "raiding" feasible both for the employer and the student. Thus, traditional vocational education curriculum can be called "front-loaded." That means that from the first day of class the student is taught skills that can be used on the job.

The question, then, is whether students who go to work in their field of training have been "retained," even if they do not graduate. Said in another way, in technical education is retention "award-based" or "job-placement-based"? For retention to be a valuable measure for our postsecondary technical schools, I believe this question needs to be answered.

Current Retention Rates

Now let's look at some figures to illustrate these ideas. I looked at our statewide data for three years—FY 1984, FY 1985, and FY 1986. Since the numbers were quite stable for these three years, I am just going to discuss round figures that reasonably represent the relationships for all three years. For each of these three years, approximately 25,000 students were enrolled in regular certificate, diploma, or degree programs (as opposed to a variety of short-length upgrading or retraining courses). Of that 25,000 approximately 15,000, or 60 percent, exited the school during the year. Of these exiters, 6,000 graduated from a program. That proportion, 42 percent, could be considered one measure of retention. In other words, of those people that ended their affiliation with the school, 42 percent were "retained" until graduation.

However, another 2,000 of the exiters were administrative completers, people who finished all the training requirements of a program but did not do the paperwork necessary to receive a formal award from the school. So instead of 6,000, we really have 8,000 people who completed a training program at the school; therefore, 55 percent of the exiters were retained to program completion, and 45 percent, 7,000, exited prior to program completion. But of that 7,000, 600 continued their education at another school or college; so they did not really exit from postsecondary education. Accordingly, actually 8,000 of 14,400 exiters were retained to program completion, giving us a retention rate of 57 percent. However, of the 6,400 persons that left prior to program completion, 1,000 took jobs in their field of study. Returning, then, to the earlier discussion of school purpose, we can say another 1,000 of our exiters fulfilled the school's purpose in admitting them to a training program. Therefore, now we have 9,000 of the 14,400 persons leaving postsecondary education in the technical schools having been retained until the school's educational purpose for the student was fulfilled. Does that mean that our retention rate is 64 percent?

The point of this convoluted flow of numbers is to illustrate that depending upon the answers to the value-related problems in defining technical school retention, the retention rate for Georgia's postsecondary technical schools could range from 42 percent to 64 percent. I believe that wide a range says that these are questions that do need answers. And, of course, the numbers could change even more if the mechanical problems discussed above were resolved.

Future Changes

What is the future I see for the postsecondary technical schools relative to defining and measuring retention?

In the realm of mechanical problems, we will be moving to a new student information system in one to three years. It will be a school-based system networked at the state level. Hopefully, it will be more interactive, more flexible, of more direct value to the schools who provide the data, and therefore more accurate. Presumably, tracking of individual students across fiscal years and between schools will be more feasible. In general, then, the system should enhance our ability to implement evaluative retention measures, based upon the answers to our value-related problems, at the school and state levels.

Regarding these value-related problems, I expect the future to bring changes to the postsecondary technical schools. I see us moving to a system which places increased emphasis on students' attaining the formal award for program completion. One of the major reasons behind the creation of the State Board of Postsecondary Vocational Education was to provide a governance environment specifically dedicated to operating a statewide system of postsecondary technical schools. The phrase "statewide system" is an exact quote from the Quality Basic Education Act under which the Board was established. A system implies a comparability across the state that assures quality for employers and mobility for students. Accordingly, the Board has a task force underway to develop general standards for programs in order to assure comparable quality of graduates statewide, to aid employers, and to provide a consistent structure of program curricula to aid student mobility.

The Board has emphasized the importance of the technical schools in fostering economic development in our state. Thus, it is focusing on responding to employer needs for training. Through its efforts in program standards, it wants employers to be confident that, if they hire an automotive mechanic from a technical school, that mechanic will come to the job with at least a specified set of skills at a known minimum level of quality, regardless of the particular school the student attended. This kind of quality assurance plays an important role in statewide economic development, because we want businesses and industries considering locating in Georgia to know that, wherever they go in our state, they can depend upon the availability of comparably skilled employees.

I have discussed this point because it has implications for retention in the technical schools. Specifically, graduation becomes more important. Quality assurance leads directly to increased accountability, and no one wants to be held accountable for a half-baked product. As a result, schools will likely place increased emphasis on encouraging students to complete their training programs. Likewise, employers will need to understand that, to reap the benefits of quality assurance, they cannot hire students out from the middle of their training.

Of course, nothing is ever simple. Like everyone else, we tend to want to have our cake and eat it too. Thus, one probable objective of the program standards project will be to include, within the curricular structure of programs, standard "early exit" points—such as clerk-typists within secretarial programs and brake or tune-up specialists within automotive mechanics programs. Such exit points will complicate our counting (i.e., mechanical problems) and our definitions (i.e., value-related problems). For example, have these early exiters been retained in the same way a graduate has? Furthermore, will early exit points encourage students to leave prior to program completion?

Nonetheless, it seems clear that increased emphasis will be placed on program graduation. That change has already been reflected in the evalution/planning/budgeting process instituted last year. That process includes a program assessment module that uses measures of enrollment, graduations, and placements to identify programs that need further quality assessment by a school. The inclusion of measures of graduates in that system is a

significant departure from previous practice, in which placement rate was the paramount measure of program success. At the same time, the process maintains the dual nature of technical school purposes by including both graduate and placement measures. Nonetheless, the changing significance of program graduation in the technical schools must be reflected in the development of retention measures for these schools.

In summary, the measuring of retention in Georgia's postsecondary technical schools is complicated by mechanical problems resulting from a somewhat antiquated student information system and by value-related problems that require that meaningful retention measures be defined in ways that reflect the purposes of these schools. Based on the current counting system and depending upon how retention is defined, the statewide system could defensibly claim retention rates ranging from about 42 percent to 64 percent. In the future a new statewide student information system should help reduce the mechanical problems of measuring retention. But evolving changes in the purposes of the schools and how they should therefore be held accountable will continue to complicate the process of determining meaningful retention measures for the system. At the same time, however, these changes, with the goal of assuring comparable quality graduates across the state, tend to make developing retention measures all that more important for the schools and the state.

ANOTHER STATE'S PERSPECTIVE IN TECHNICAL STUDENTS

Diana Joseph
Greenville Technical College
Greenville, South Carolina

To understand student retention at Greenville Technical College the following items will provide background information. Greenville Technical College, one of 16 technical institutions in South Carolina, is the oldest and largest in the state. It is sometimes referred to as the "flagship" technical institution in South Carolina. Program offerings include arts and sciences (a transfer program), allied health, nursing, business, adult education, industrial, engineering, and continuing education. Each quarter Greenville Technical College enrolls approximately 6,000 curriculum students, and serves nearly 12,000 students per week in the continuing education program. Greenville Technical College is the only public higher education institution in Greenville County. A large number of students intend to transfer to other institutions at a later date. There are two other higher education institutions in the county which are private and very expensive. The mission and purpose of Greenville Technical College, as with a majority of technical institutions, is to meet the needs of business and industry in the community by way of training and re-training students for employment. The city of Greenville is known as the textile center of the world and a large number of people are employed in business and industry. However, as the textile industry declines, the leaders of the city of Greenville strive to bring in new and different types of industry.

When addressing retention at Greenville Tech, each program of study is considered individually. The division of arts and sciences has the largest enrollment but on a percentage basis has the lowest graduation rate. Arts and sciences is designed as a transfer program, therefore retention is not an issue. A large number of Greenville County high school graduates remain in the area, live at home, and are employed part-time in an attempt to save money during the first two years of their postsecondary education. As stated earlier, Greenville Tech is the only public higher education institution in the county. A majority of arts and sciences students will not complete the requirements for the AA or AS degree before transferring to a four-year program at another institution.

Retention is a concern in the nursing and allied health programs. These programs are highly structured. The degree must be conferred and a state liscense must be obtained in order for the student to obtain employment.

In the industrial and engineering divisions, retention is also a concern. Students enroll in classes to acquire the skills required to get a job. For many, after they are employed, obtaining a degree is of little importance to them. Greenville Technical College does work very closely with business and industry in the area in an effort to keep abreast of the changing employment environment.

Greenville Technical College is addressing retention by implementing the following: (a) If a student misses three consecutive classes, either a counselor or the instructor contacts the student to determine the problem and aid in their return to class; (b) federally-funded AHEAD and IMAGE projects are utilized by the allied health and nursing programs to assist students with disadvantaged backgrounds; (c) the orientation program in the health professions includes student visits to hospitals so that they can observe what health professions job entail, and efforts are also being made to expand this concept in other divisions; (d) class sizes are limited to allow students to receive specialized assistance from instructors; and (e) follow-up evaluations are conducted with all

graduates and their employers to assess the programs.

In summary, retention is difficult to define and must be defined by each institution according to its individual characteristics. Factors such as geographic location, demographics, types of students, mission of the institution, financial resources, and economic environment contribute in the retention process. Technical education is and will be to even a greater degree in the future an area of increasing importance in our society.

RETENTION PROGRAMS THAT WORK

John Sallstrom
Georgia College

We have a number of programs at Georgia College that have been successful regarding retention. One is Georgia College 101 or the student success course which was first offered in the fall quarter of 1978 and was modeled after one at the University of South Carolina. The program is designed to encourage students during their first year of enrollment to understand the college, to understand its services, to understand and appreciate higher education, to make career choices, and to develop interpersonal relationships with other students and faculty. Over the years this program has been expanded. We encourage the developmental studies students to take GC 101 because it is one course they can take and receive academic credit. The students who are undecided about their major often find the GC 101 course very helpful in determining their academic interest.

Several years ago, a group of our faculty in the School of Business conducted an intensive evaluation of the GC 101 course. They concluded this particular course positively affected the retention rate for all students, and the program positively affected student success rates for those entering college with less potential for success. The general conclusion reached from this evaluation of GC 101 is that this course does seem to meet the objectives of increasing retention while at the same time helping to increase the success of students that enter Georgia College with minimum SAT scores of 800.

The GC 101 classes, incidentally, are connected with our minority mentor program or minority advisement program. This has proven to be one of the most effective ways to meet the requirements of the minority mentor program because these classes provide the activities that are mandated by the Board of Regents regarding minority retention. The GC 101 classes give faculty an opportunity to meet minority students directly on a day-to-day basis in an integrated setting.

We also provide an orientation for new faculty each fall with the idea that freshman faculty can empathize with freshman students. In any case, new faculty participate in the regular training program for faculty teaching the GC 101 courses. Sometimes new faculty volunteer to teach the GC 101 courses. Even if they do not, they have been introduced to the kinds of problems that freshmen encounter.

Another Georgia College development is a faculty mentor program. The mentoring program for new faculty matches them up with some of the more successful teaching faculty. The program also has been good for established faculty by providing an opportunity to glean fresh ideas from the new incoming faculty. One thing that our administration has greatly emphasized is the need to improve teaching effectiveness. This area undoubtedly impacts on retention but not always in ways that can be easily measured. It is very important for the faculty to be aware of student needs and to make every effort possible to improve their teaching effectiveness.

Another administrative effort connected with the GC 101 program is to encourage students and faculty, whether they are teaching these classes or not, to participate in extracurricular activities on the campus. The president has made a point of attending as many concerts, plays, and athletic events as possible and has encouraged other faculty to attend also. The visibility at programs of the president, administrators, and faculty is noticed by the students; and though the impact on the students is difficult to measure, rest assured the visibility does begin to have some positive impact along the way.

There are several other effective measures we have taken at Georgia College. A comprehensive academic advisement program has been established for several years. As part of the faculty orientation program in the fall we have an advisement training session for all new faculty. We also have advisement workshops for established faculty who perhaps need some refresher skills. We offer advisement services not only to minority students but also to international students, professional students, provisional students, and undecided students. This past spring a survey of approximately 4,000 students resulted in over 1,000 responses regarding effectiveness of advising. Results showed that 91 percent of the students felt that their advisors were effective. These results were sent on to departmental chairs, deans, and upper level administrators; the reward system is there for faculty members who are good advisors.

Georgia College established a developmental studies program before it was required by the Board of Regents. Research indicates that the students who have taken developmental studies courses, for the most part, have been successful with the initial math and English courses in the college core curriculum. In addition, many of the developmental studies students at Georgia College have gone on to graduate with honors. For the most part this program has been successful, especially in English.

Results from the evaluation of developmental studies conducted last year suggest that many of the students who go into the beginning math courses have a great deal of difficulty in our math department. Therefore, the faculty feels the exit criteria for math from the developmental studies is far too low. They feel that students who take Math 101 repeatedly and fail or withdraw should be required to take developmental studies again before being allowed to repeat the regular math sequence. A concern of our faculty is that they do not want to lower academic standards in order to retain students. The general consensus on our campus is to maintain academic integrity, not just retain students at any price.

We do have other programs that aid in the retention of students. For example, we have a two-day comprehensive orientation program during the summer to which students and parents are invited. The GC 101 class then is a follow-up to the summer orientation session.

The close working relationship between the academic affairs division and the student affairs division at Georgia College is successful. The people in student affairs serve on the advisement steering committee. They work with our minority advisement program and conversely those in academic affairs serve on the orientation programs which are operated by the student affairs division. We work together to encourage students to take advantage of the counseling services that are available. Our counseling staff has been expanded over the years and it is a very effective addition to the overall retention program.

The one factor in retaining students, that has the greatest impact and is the least measured, is actual classroom activity. It is very important to realize not only the types of interactions that occur in the classroom but also the effect on students of faculty training and attitudes. The faculty's relationship with their students outside the classroom can be a boost to retention. I have worked with many students on an individual basis, trying to help them solve problems in and outside of class. There are also many other faculty who have spent untold hours in this same way. It is very seldom noted, but is revealed in the overall outcome, that faculty members who are really concerned about students and want to do everything they can to help them are one of the most vital aspects of a good retention program.

RETENTION PROGRAMS THAT WORK

Fran Rauschenberg
University of Georgia

I hesitate to say that retention programs work on the University of Georgia campus because one of the biggest problems that we confront is the lack of appropriate methodology. Many of us do not know what we are measuring because we do not know who we are measuring. On a traditional-aged campus such as the University of Georgia, we sometimes become complacent and think that with an approximately 20 percent attrition rate in the freshman to sophomore year we have no problems. I believe we do have the potential for problems in retention.

One of the things that I have tried to do is build some of the University of Georgia retention programs on a common theoretical base. Let me site some of the research that I have found appealing and useful.

One of the research models on students and attrition that one can draw on is the Tinto Model. Basically Tinto states that a student arrives on campus with a lot of built-in factors. These factors include family background, pre-college schooling, and, of course, each student's own individual attributes. There is no way to modify or change any of these factors since they are a part of the student's makeup when he or she arrives on campus.

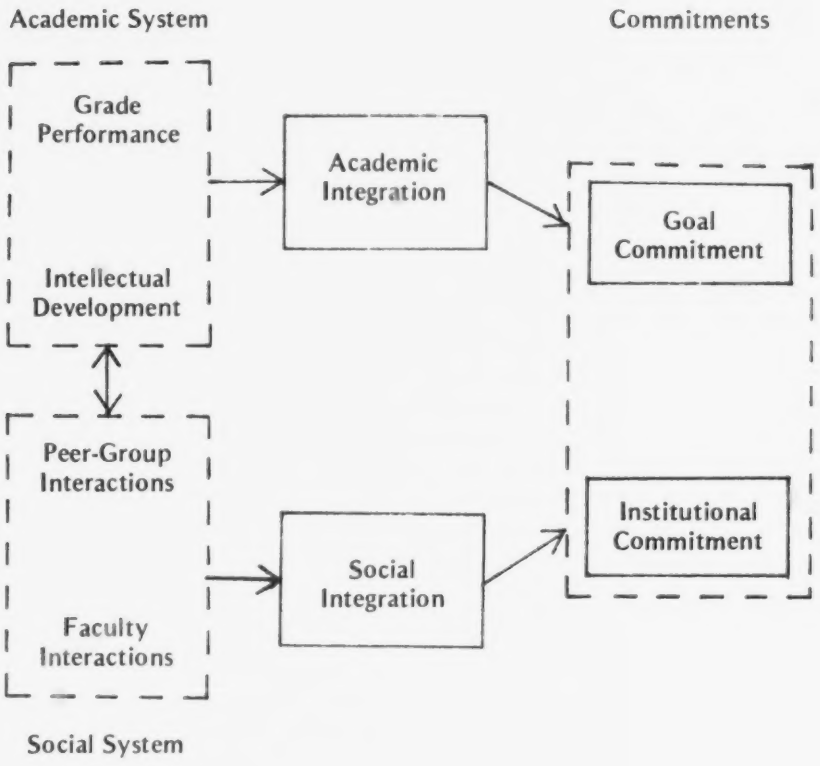
As instructors and advisors, we can influence the student's goal commitment and institutional commitment. The university community expects students to finish some sort of program, to walk away from our campuses with a piece of paper in their hands certifying that they have completed a program. This is not always what the student has as his or her goal. Also, we are not clear on exactly what amount of commitment the student does have to the institution that they have selected. We would like to believe the campus students attend is top on their list, yet we know that this is not always true. Students attend a college because it is close to home, or because it is very far from home. Many come because a parent is an alumnus, because their big brother is a current student, or because it is close to the boyfriend or girlfriend. There are all sorts of reasons why students are committed to an institution.

Once a student arrives on campus, two different systems take over: the academic system and the social system. While I consider myself a representative of the academic side, I can attest that a student's involvement on a social level is extremely important. We feel that through some of our extracurricular programs we are promoting the involvement of students in a variety of campus life areas. Also students are interested in their peer group interactions: do they make friends, do they get along with the roommate, do they pledge the fraternity or sorority of their choice. But students will define their academic integration very specifically. They are looking for good grades, and probably not so much for intellectual development—although that is what we are interested in as faculty and administrators. Students are also interested in faculty interactions. Many of UGA's freshmen will have three or four classes during the freshman year with enrollments of over 150, which make it extremely difficult for students to have quality faculty interaction. This is where our academic advisors become so important, and this is one place where most students can expect to have a personal one-to-one relationship. Tinto concludes that these factors produce a kind of academic and social integration which realign students' goals and institutional commitments. This is an ongoing process that never ends.

Educational research tells us that freshmen or first-year students tend to make up their minds about whether they are going

FIGURE 1

SUBSECTION OF
TINTO'S CONCEPTUAL SCHEMA



SOURCE: Adapted from Vincent Tinto. Dropout from Higher Education: A Theoretical Synthesis of Recent Research, *Review of Education Research*, Winter 1975, *45*, 89-125.

to stay at an institution in the first six weeks. When the dropout decision is made, how much quality information do they have? For many of them, they have just taken their first test. They have no grade. What they do know is that they do not get along with their roommate, that visitation hours which include 24-hour visitation of the opposite sex in dorms on the UGA campus is proving to be noisy and lacking in any sort of privacy, that the food in the cafeteria tastes terrible, and that they have a bad cold. By the time the sixth week rolls around, they usually are sick. They go home and think to themselves, "Home never looked so good." A freshman living off-campus who was in my orientation class told me that housework always looked so easy when his mother did it. But now that it is three male roommates and him, it is not easy and his roommates do not like his cooking. Students are coping with a lot of things. For a lot of freshmen, all of a sudden the goal of earning the degree in four years is lost. All they want to do is finish the quarter. They want to go home to the nearest school, to the hometown honey, to mom and dad who looked so bad just six weeks before. Providing an atmosphere of caring and concern is a difficult task for higher education.

My favorite research is Bill Perry's model of intellectual and ethnical development. Perry's model states that there is a universality to the freshmen-year experience. Perry also states that most freshmen enter college during a phase described as dualism; and just like it sounds, everything is either black or white, right or wrong, up or down. This is why freshman students have a hard time taking a test and doing well on it, because the professor does not tell them what to study. College is so different from high school where all quarter long they were told what to study, what the questions were going to be, and how to take the test. At college they have a syllabus at the very beginning of the quarter and no clues after that. My favorite word to describe a freshman is "clueless." Freshmen describe themselves that way.

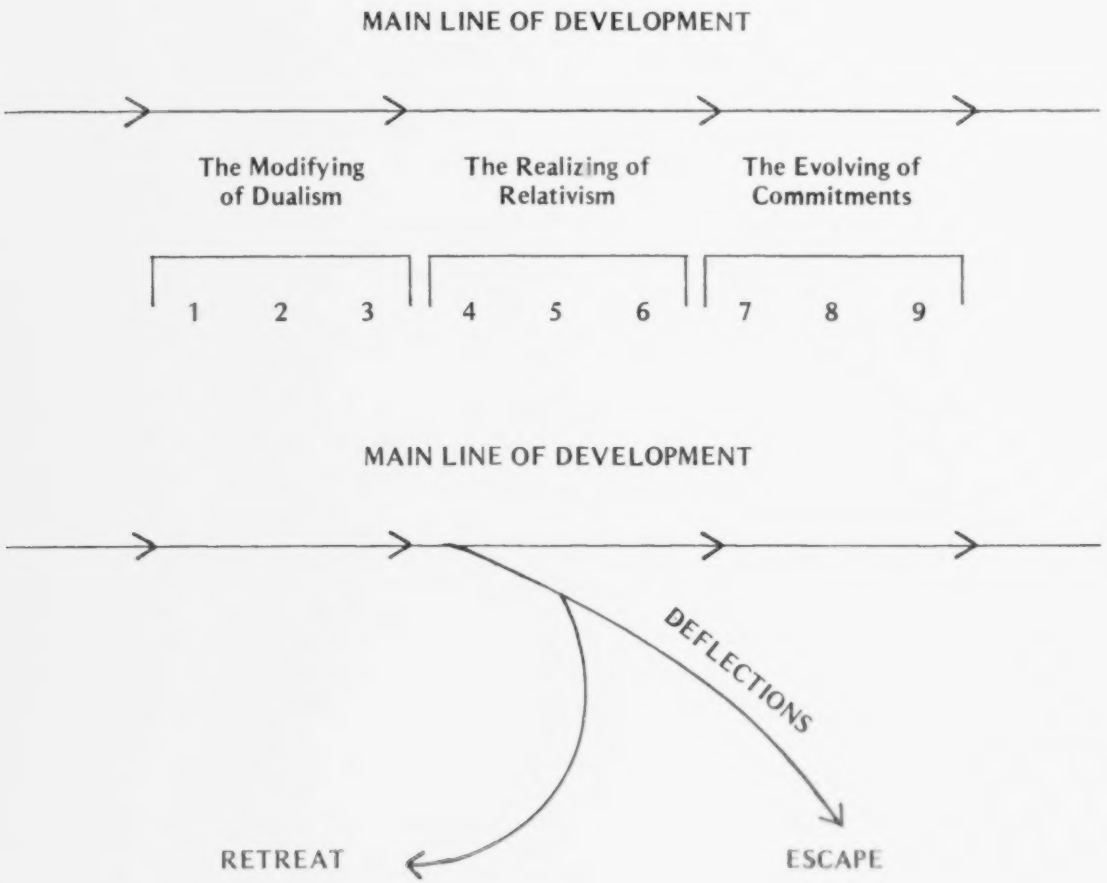
One of the tasks that I have set for myself is to educate my campus as best I can about how freshmen really are. Perhaps that means reminding other people what it was like to be a freshman. I do think that freshmen have changed a great deal. I find that they are very, very career conscious. They come in as first-quarter students and want to choose a major, to get on track, and to never deviate. I asked freshmen in my orientation class to write an essay on what they would like to achieve by the end of fall quarter. Five out of 20 students told me that they wanted to be 100 percent adjusted to college life by the end of fall quarter—ten weeks to accomplish what many of us at age 35, 45, or 55 have not yet accomplished. I think it is important to discuss with them whether this is a realistic goal.

Freshmen are the group that deserves our time and our efforts. They are not yet capable of thinking in multiple-level boxes and three-dimensional pictures. They are just trying to get to class on time, and they are not even succeeding at that sometimes. Freshmen are scared to go into the library. Freshmen are terrified to have attention drawn to them, and will go out of their way to let no one know that they are freshmen. The orientation leaders usually ask the freshmen what is the first thing that they are going to do when they arrive on campus so that no one will know they are freshmen. Well, they are going to throw away all of their orientation materials because they would never dream of pulling that out near a bus stop and letting someone see that it is freshman material. They also say they will not wear anything with a bulldog on it—I don't think that is really true—because they think that is what identifies them as freshmen.

What are we doing at the University of Georgia to address freshman concerns? One activity is the University 101 course which is for freshmen and other first-quarter transfer students. A second activity is targeting freshmen and their parents. For the first time this

FIGURE 2

SCHEMATIC REPRESENTATION
OF PERRY'S STAGES OF DEVELOPMENT



SOURCE: Adapted from William G. Perry, Jr. *Forms of Intellectual and Ethical Development in the College Years: A Scheme*. New York: Holt, Rinehart and Winston, Inc., 1968, p. 58.

past summer every freshman's parent received a letter from me urging the parent to attend summer orientation because I have found that freshmen do not want their parents "to tag along and ask dumb questions." The reason being that out of the crowd of 250 freshmen, someone might know that that was their mother who asked that stupid question. The fact that 200 other mothers wanted to ask that same question is not the point. The point is that their mother asked. We had a big increase in parent participation because of the way in which we wrote the letter. I wrote, "I just bet that your son or daughter has just sold you a bill of goods on the summer orientation program. They just told you how important it is to learn how to become independent and that this is a good time to go off on their own and not have you along." I had all the favorite arguments and, sure enough, parents looked me up at orientation and said, "We had just had that conversation at the dinner table, I can't imagine how you knew."

Midway through the fall quarter we have a second mailing for parents. It is a letter telling them that if they have questions or problems or just want to talk to somebody, they may call me. And call me they do! The mailing to parents is a very worthwhile tool, not only from a public relations standpoint, but because it does convey the impression to parents and students that the University is not a large and impersonal place. We do care about our students, particularly freshmen. We are interested in their adjustment to college and we will do almost anything to help them achieve it.

A third activity is student surveys. We administer a retention survey—a follow-up study of students who leave our institution for unknown reasons. We do attempt to screen as many names off that list as possible, contacting only the people for whom we do not know anything. Reasons for leaving include first and foremost that there is no money, parental problems, ill parents, marriage and family obligations, children needing day-care arrangements, and illness of the student. Right behind those reasons that we do not think we can do much about are: uncertainty about degree and major, just not knowing why they are attending college, needing time off, and wanting to think about the advisibility of attending college. Another reason for leaving the University is housing and roommates—often an off-campus situation. Students have a hard time being assertive about what their rights are in regard to living arrangements.

We also survey our students about their academic advising. We poll seniors on the eve of graduation—most of them are in a five-year program—and we also poll our freshmen at the end of the freshman year. We find distinctly different responses on those two questionnaires. Over 75 percent of those two groups have found the advising at UGA to be excellent or good. When asked what things their advisors need to improve, the freshmen responded with the need to be loved more. The freshmen want someone who knows them, who recognizes them, who calls them by name, who has prepared the folder in advance and does not seem to be surprised to see them, and who asks about their well-being for the last two or three quarters. The seniors, on the other hand, do not care about personal attention, but are concerned with career information—who gets jobs, what jobs pay, how to get into graduate school, and can the advisor write a decent recommendation.

We do have a lot of data that we do not always know how to interpret, or how to get it to the people who could use it; but, if nothing else, we are always willing to try a new program.

PRINCIPLES OF LEARNING & DEVELOPMENT:
Can They Help in Retaining Students?

Cameron Fincher
Regents Professor and Director
Institute of Higher Education

Student retention is one of many perennial problems in postsecondary education. The reasons are both economic and educational; they are also a function of our inexcusably poor memories—as societal institutions.

Indeed, the failures of institutional memory are responsible for many of the problems we periodically encounter in education beyond the high school, problems that we apparently solve, and then re-solve, and then solve again! Obvious examples are: (a) our periodic concern for marginal, underprepared, or educationally disadvantaged students; and (b) our continuous tinkering with admission requirements, academic standards, and the measured outcomes of education.

Evidently we have not learned that our institutional memories are similar in many respects to our individual memories—that is, well divided into short-term and long-term subsystems. And unfortunately, we do not sufficiently appreciate in education that we are long on our long-term memories and very short on our short-term memories. As George Miller (1956) pointed out many years ago, most of us can retain only about seven specific facts, items, bits-of-information in our short-term memories long enough to use such information. Compare the ease with which we recall our home telephone number of seven digits, as opposed to credit card numbers we may have had for years.

Thus, most of us are heavily dependent upon our long-term memories—the subsystem in which we store information and knowledge for later retrieval and transfer, application, use! When pegged to dramatic events (the assassinations of John F. Kennedy, Robert Kennedy, and Martin Luther King, Jr.), most of us can recall many events, names, places, etc. for that particular time. Such memories need not be significant or meaningful—and they certainly need not causally relate to the events with which they are strongly associated.

In education historians are our best long-term memorists. We can thus read and remember much about the founding of our institutions; the leadership of early presidents, deans, and directors; distant times of trouble; and obstacles or barriers that were overcome in the past. It is not unheard of for university presidents to know much about their predecessors a century-removed and nothing at all about immediate predecessors once or twice removed.

One reason, of course, is the historian's reluctance to write about the living— a mark of wisdom in a litigious age. Another is the historian's careful schooling in the "principle of diminishing coverage." To wit: the closer an event in time, the less that is said about it. This means, of course, that institutional histories and historians are of little help in short-term institutional memories. To the contrary, neither historians nor educators think of recent events as being history—and we seldom record the details of specific, important events because we have an unwarranted faith in our personal short-term memories—and we assume that others of comparable intelligence, education, and experience will recall institutional events with the same objectivity and detailed facts that we ourselves do.

Why, then, a statewide conference in Georgia on student retention in 1986? Granting that student drop-out or withdrawal is a problem that we have never solved in postsecondary education and granting the economic argument that it is more cost/effective to retain sophomores and juniors than to recruit

and admit freshmen—and granting the detriment to public interest when 50 percent of our entering freshmen leave college without completing their education, and even granting our ethical obligation as educators to do all within our powers to retain and educate those admitted to our institutions—we can still ask why our collective memories are so poor when we try to recall what our schools, colleges, and universities did the last time they sought constructive means of retaining students?

One answer must be found in our failure to remember that forgetting is an active process. We have been greatly distracted in recent years and we have been actively concerned with other problems, issues, and challenges confronting postsecondary education in a society that is increasingly pluralistic and increasingly diverse. There is great competition for the limited capacities of our collective storage facilities and there is much interference in the activation of our sluggish retrieval systems. Like many of our colleagues and most of our students—we did not adequately encode important information and experiences because we were under no compulsions to do so. In other words, we did not need to remember and we didn't; we did not organize our knowledge for storage and retrieval and we did not plan for the future use of that knowledge; neither did we rehearse, repeat, or reinforce the lessons we presumably learned; or to be irritatingly specific, we didn't take good notes and we seldom bothered to review the skimpy notes we did take. We did not even use decent memory crutches (i.e. mnemonic devices) to aid recall. In school, few students fail to remember that geography can be spelled by recalling that "George Ellis' oldest girl ran a pig home yesterday" and some of us still remember the colors of the spectrum by recalling an old friend named ROY G BIV.

Six Aids to Recall

The improvement of undergraduate education is, in the 1980s, the most important challenge confronting higher education. Since 1984 at least six national commissions have addressed the question of quality in undergraduate curricula and teaching—and each has advocated substantive, pervasive reforms that imply we should recall what we supposedly learned in the past.

The National Institute of Education (NIE) report *Involvement in Learning* (1984) called for a more active participation of students in their undergraduate programs; the National Endowment for the Humanities (NEH) report *To Reclaim A Legacy* (1984) advocated the restoration of the humanities to a central position in undergraduate curricula; and the Association of American Colleges (AAC) report *Integrity in the College Curriculum* (1985) suggested ways in which the meaning and purpose of the baccalaureate degree could be re-established. Only two years later, the Education Commission of the States (ECS) issued a report on *Transforming the State Role in Undergraduate Education* (1986); the American Association of State Colleges and Universities (AASCU) issued its National Commission on the Role and Future of State Colleges and Universities' report *To Secure the Blessings of Liberty* (1986); and the Carnegie Foundation for the Advancement of Teaching (CFAT) completed a comprehensive study of *College: The Undergraduate Experience in America* (1987).

Each report, in its own way, recommends a return to earlier concepts, principles, and practices that have served postsecondary education well in the past, and each deals directly with policies, programs, and educational purposes related to the retention of students in postsecondary education. To some extent, all six reports are reaffirmations of a national faith in education. But faulty recall is much in evidence, and despite the emphasis given student learning and development, it is often necessary to read between the lines of each report. In brief, authors blessed with good memories are still a rarity in academe!

NIE, NEH, and AAC Reports:

In its dying gasp as a federal agency the National Institute of Education severely criticized four-year colleges for not involving students more actively in their own education. The NEH report was a "clarion call" from the pen of its director to re-assert the rightful place of philosophy, literature, and history in undergraduate curricula. And the AAC, after long deliberation, sought its redefinition of educational meaning and purpose in what most of us would regard as traditional values. To reform undergraduate education, each report would require, if necessary, the extension of degree programs to five years—and each would require evidence in assessed, measured, or evaluated form of institutional effectiveness.

With all their limitations and misplaced emphases, however, the NIE, NEH, and AAC reports underscore the benefits of assessing student performance and informing students of the progress they are making (a concept or principle long known to learning theorists and researchers as knowledge of results, the law of effect, or reinforcement); of seeking ways in which students can assume more responsibility for their own learning and be encouraged to take a more active part (a well-established principle that active learning is superior to passive learning—or effective learning is and must be an active process); and in finding ways whereby significance and meaning (these are not terms used in the reports) can be restored to colleges' courses and curricula (vouchsafing a long-established conclusion that meaningful relations can be perceived—are more readily mastered than insignificant or unrelated subject matter). In brief, like Peters and Waterman in their bestseller, *In Search of Excellence,* the authors of the NIE, NEH, and AAC reports base their conclusions and implications (directly or unknowingly) on psychological principles of education that were clearly established and propagated in the 1950s. Knowledgeable readers, with good memories, are unable to read in any of the three reports any concepts, principles, or practices of teaching and learning that were not widely known prior to the mid-sixties and the many rapid changes the 1960s brought to postsecondary and higher education.

ECS, CFAT, and AASCU Reports:

The three reports issued in the closing months of 1986 tell much the same story. General and/or liberal education must be restored to a more central, basic, or embedded position in academic degree programs; teaching and learning must be given more emphasis as essential functions; and all educational institutions must do a better job recruiting, admitting, retaining, educating, and graduating students.

The ECS Report challenges postsecondary institutions to help improve student preparation for college; to prepare admitted students for opportunities in a changing work force and society; to improve both particiption and completion rates; to do a better job of meeting the diverse needs of students; and to assess (more effectively) student and institutional performance.

The Carnegie Foundation report would turn every knob on higher education's imaginary control panel. Like Hubert Humphrey, who was once accused of having more solutions than the nation had problems, Ernie Boyer, president of the Carnegie Foundation, may offer more solutions than institutional attention spans and working memories can possibly accommodate. The Carnegie Foundation report includes recommendations for:

(a) the recruitment, selection, admission, and orientation of students;

(b) individual and institutional goals and values;

(c) basic skills in literacy and communication;

(d) core curricula and field of specialization;

(e) faculty recognition and renewal;

(f) classroom teaching, learning, and evaluation;

(g) libraries and other learning resources;

(h) residential living and quality of campus life;

(i) academic governance;

(j) community services and commitment; and

(h) measuring college outcomes!

The AASCU report makes a more focused and a more appealing argument. It asks directly (and quite sensibly) that state colleges and universities "reorder our priorities to make a full and unequivocal commitment to learning." In doing so, the report is not embarrassed to speak of ignorance (instead of functional illiteracy) and undeveloped intelligence (instead of unrealized potential).

Principles of Memory and Retention

The implications of human memory and retention for education are as old as Aristotle's principles of memory: similarity, contrast, and contiguity—and as old as his distinction between remembering as the spontaneous reproduction of past perceptions (daydreaming) and recall as the active search for past perceptions (concentrated thought). Not only are we likely to remember events that are similar, events that are different, and events that are close to each other in time and place, we are also likely to remember:

(a) events that are repeated (the frequency principle that appears time and time again in human thought and discussion concerning memory, retention, learning);

(b) events that involve emotional excitement (a principle of effect that also enters the psychology of memory and learning in various ways); and

(c) events arranged in a "fixed order" (Aristotle's version of meaning and significance in memory and learning).

In the early 19th century Thomas Brown, the Scottish philosopher, added to Aristotle's principles of memory by pointing out the influence of: liveliness; recency; mental or temperamental differences among people; their state of health; and their prior habits engrained by experience.

Thus, the gradual conclusion that primary, recency, and frequency are "fundamental laws" of association. We remember and we can recall with relative ease: events that are the first of their kind (our first day in school; our first year in college; etc.); events that have recently occurred; and of course, repetitive events that occur with regularity or predictable results.

Principles of Learning and Development

What, then, are the implications of learning principles, principles of memory, and concepts of development for the retention of students in postsecondary education? Simply this: in education we bore, alienate, turn off, flunk out, run off, fail to reach, and never get to know an inexcusable number of students who tell researchers that they: must drop out for economic reasons; are leaving for family or other personal reasons; have lost interest in school; or simply that they had rather do something else! Only occasionally is it evident from interviews with students or from their ratings of teaching effectiveness that there is a vast generation gap between the learning needs and interests of students—and the teaching and research interests of faculty. Only occasionally is it clear that there are great discrepancies between our sales departments (admissions) and our service departments (college classrooms). And almost never do we fully appreciate the chasms that have formed between the needs and expectations of learners and the course objectives and individual expectations of college teachers.

If postsecondary institutions were to take seriously the challenge (AASCU report) of re-ordering their priorities "to make a full and unequivocal commitment to learning," it is altogether possible that they could meet the challenge (ECS report) to improve the participation and completion rates of both majority and minority groups in the American nation.

There are many concepts, principles, and practices to be found in the literature of psychological theory and research on human learning and development. Ebbinghaus' classic studies of memory (1885) are now over a hundred years old, but they still contain much that is relevant to postsecondary study and learning. Much of what our students learn is learned more effectively when distributed over a period of time, and repetition or scheduled practice is not an archaic way of preparing for occasions when students are expected to recall what they presumably have been taught. There are still good reasons for classes in foreign languages and mathematics to meet five days a week; and there are many reasons to believe that history courses could meet only two days a week—just as there is amply reason to suspect that literature and philosophy should not be taught in classes where assigned readings cannot be discussed in an informed and critical manner.

Even more relevant to the participation and involvement of students in learning is the quiet revolution that has taken place in developmental psychology over the past 30 years. If, at one time, psychological applications to education were caught up in a rush to test the many ways in which human beings differ, to derive prediction equations and to develop selective admission models, and to prove to the satisfaction of policymakers that academic survival (and its counterpart academic failure) were predictable, such has not been the case in recent years. If, in the past, the many variations of human behavior and learning were explained by individual capacities, aptitudes, abilities, interests, dispositions, tendencies, and preferences, it makes more sense in the 1980s to study the stages, phases, levels, steps, intervals of personal development that learners go through—often at his or her own pace and without easy interventions that would accelerate or retard the process of development. Also relevant is an equally dramatic revolution in cognitive psychology with profound (as opposed to popularized) implications for psychology.

It is thus possible that the basic underlying expectation in higher education is the transition of adolescents to adulthood—a concept that has been much clarified in the past 30 years but one that is still poorly understood when we discuss personal development and interpersonal competence. Yet, there is no great confusion of purposes when parents, taxpayers, employees, public leaders, and other stakeholders in postsecondary education tell us what kind of adult they want college students to become. They ask for graduates who are: (a) economically productive; (b) socially responsible; and (c) personally effective. They would like to see in graduates: (d) some degree of aesthetic sensitivity; (e) evidence of religious, ethical, or moral tolerance; and (f) a bit of appreciation for physical health or adult fitness. They would no doubt prefer graduates who are also: (g) politically conservative; and (h) emotionally mature. And if graduates are also: (i) open-minded; (j) culturally informed; (k) technologically sophisticated; and (l) able to discuss some of the world's better literature, philosophy, and socio-economic-political systems, that is the cultural frosting on their educational cakes.

In many respects, we can say that learning and development are the educational processes by which "the inputs" of growing, developing, maturing adolescents become "the outputs" of educated, self-governing, maturing adults. Or more accurately, perhaps, education is the learning and developmental processes by which college students replace ignorance (mistaken information and beliefs) with knowledge (higher-level orders of information and beliefs); superstition

(ineffectual effects to control one's environment) with competence (skills, abilities, proficiencies); and prejudice (the premature evaluation and judgment of individuals, groups, societies, and cultures) with understanding (attitudes, beliefs, and values that are informed by experience).

Gilbert Ryle, an Oxford University philosopher, has reminded us that: "Learning how or improving in ability is not like learning that or acquiring information. . . Truth can be imparted (suddenly) . . . procedures can only be inculcated . . . (gradually) . . ." (p. 59). Some of us have long believed that knowledge can be equated with "learning that" while the development of competence is equivalent to "learning how" and the nurturance of understanding is a matter of "learning why." We have long been convinced that psychological principles of learning and development can indeed be applied to the acquisition of knowledge, competence, and understanding—and that education is best appreciated as the conditions, situations, and opportunities by which learning and development occur.

In closing, it is well to add "a principle or two" concerning the application of learning and development principles on college campuses. The first such principle is the same as the first principle of medicine, Do No Harm! This is simply to say that in applying sound principles of memory and retention, the laws of associative learning, and/or Thorndike's law of effect, we should interfere as little as possible with equally sound principles of development. Those of us who teach should always remember that learning takes time. To earn the 200 or so credit hours that are required for most bachelor's degrees, most students require something in the neighborhood of 600+ learning hours—only a third of which is likely to be in a college classroom. The assignment of meaningless or insignificant course readings and lab exercises, or the requirement of trivial term papers or projects, often interferes with the 400+ study hours the undergraduate student is supposed to have.

Another over-riding principle, of which all faculty members should be appreciative, is that learning takes place elsewhere! Such is especially true of the college student's personal development, interpersonal skills and competence, and the majority—perhaps—of the informed attitudes, beliefs, and values that contribute so much to the individual's growth, development, and maturity. Students will always learn more than they are taught in class, and they will always read something other than assignments in textbooks. And what they remember from the courses we teach so well is about 20 percent of the substance and content we cover.

And so, we return to our short-term memories. Too much of what takes place on too many college campuses is "short-term learning and development." And when would-be sophomores do not return for their second fall quarter or semester, it could be that first-year experiences never reached their long-term memories—and they didn't remember to return!

REFERENCES

Miller, George A. The Magic Number of Seven Plus or Minus Two: Some Limits on Our Capacity for Processing Information. *Psychological Review*, 1956, *62*, 81-97.

Ryle, Gilbert. *The Concept of Mind*. New York: Barnes & Nobles University Paperbacks, 1949.

PLACEMENT AND RETENTION IN REMEDIAL/DEVELOPMENTAL PROGRAMS IN THE SREB STATES

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Postsecondary institutions have always tried to serve students in need of special assistance to achieve their educational goals. For over a century, the lack of basic skills in postsecondary students seeking a college education has been a challenge to the higher education community. In the latter half of the nineteenth century, basic skills programs existed at such schools as Cornell, Vassar, and Yale (Brier, 1984). By 1915, special departments to prepare students for meeting college admission standards existed in over 350 colleges and universities in the United States (Maxwell, 1980). And by 1984, over 82 percent of the approximately 2,800 institutions of higher education in the nation offered some form of remedial or developmental education (Department of Education, 1984).

Initially, growth in remedial/developmental programs occurred as a result of broadening educational access. Recent growth patterns have been spurred on by the emphasis placed on increasing educational quality. Large numbers of students who lacked basic skills were admitted to college and sorely needed remedial instruction before undertaking college study. For example, the New Jersey Basic Skills Assessment Program found over 30 percent of their entering college freshmen in need of remediation in reading, writing, and mathematics (Morante, Faskow, and Menditto, 1984). In Georgia, it was estimated that 32 percent of the Georgia high school graduates going on to state colleges in Georgia needed remedial help. Further, according to a 1984 federal survey, 27 percent of all entering college freshmen were enrolled in remedial mathematics courses.

With such large numbers of underprepared students applying for college admissions, it is not surprising that recent educational reforms stress the importance of raising standards and quality at the postsecondary level. Two important components of the standards and quality issue are the placement and retention of students after admission to college.

Two prevalent trends are identified in research and literature. First, large numbers of high school graduates are applying for college without the basic skills necessary to do "college-level" work. Second, there are increasing numbers of remedial/developmental programs in existence at the collegiate level. However, what is not well established is what happens to underprepared students after they are admitted to college. This raises several questions: (1) What determines how institutions assess and place incoming students? (2) What kinds of assessment instruments and scores do institutions use for placement purposes? and (3) How effective are remedial/developmental programs at preparing students for college-level work?

The SREB Study

A Southern Regional Education Board (SREB) survey of remedial/developmental programs in public two- and four-year institutions was conducted in 1986. Specifically, the survey contained five major components: (1) placement criteria, (2) selected remedial program descriptions, (3) policy and organization, (4) exit criteria, and (5) evaluations. This paper focuses on two of these components—placement criteria and evaluations.

The survey was sent to 489 of the 543 public two- and four-year colleges in the 15 SREB states (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West

Virginia.); 186 were four-year institutions and 303 were two-year institutions. These institutions had to meet one of two criteria for inclusion in the study: they had to offer a bachelor degree, or they had to offer the associate of arts degree or degree transferable credit. The overall response rate for the survey was 83 percent; 88 percent for four-year institutions and 79 percent for two-year institutions.

Curriculum Placement

Institutions were asked to identify how they determined whether students should be placed in college-level curricula or in special programs to remedy deficiencies in reading, writing, and mathematics. Four responses are readily identifiable by their frequency of use. Mandatory assessment and placement is first among these responses; it is used by over 42 percent of the institutions. Although first among institutional responses, this still means that less than half of the institutions require assessment and placement for incoming freshmen. The second most frequent response is faculty referrals, which is used by over 36 percent of the institutions. The third response is students who recognize their own deficiencies and seek help (self-referral)—used by over 33 percent of the institutions. Finally, those students entering college with low admission scores is used by over 30 percent of the institutions in the region (Table 1).

Test Variety

Table 1 shows mandatory assessment and placement as the most popular means of determining curriculum placement for entering college students. To further support this finding, an earlier study—using these same survey data—identified almost 100 combinations of about 70 different tests in the subject areas of reading, writing, and mathematics to place students in either college degree-credit remedial/developmental courses (Abraham, 1986). These tests ranged in variety from nationally-normed or standardized tests, such as the American College Test (ACT) or Scholastic Aptitude Test (SAT), to in-house/institutionally-developed tests.

The Abraham (1986) study also categorized the different tests used for college-level placement into their subject area (reading, writing, or mathematics) of use. For example, in reading, 31 different tests are identified by SREB institutions for the purpose of college-level placement. In writing, 30 different tests are identified and in mathematics, 36 tests. These data clearly indicate that a variety of tests are used by institutions in the SREB region to place students at the college level.

The large variety of tests in use suggests two major implications. First, that the different tests measure different abilities and skills. If this is the case, then it is quite appropriate that different tests be used to fulfill different institutional purposes. Second, if these tests measure the same abilities and skills, then test selection is based on other factors. In this instance, it is reasonable to suggest that the large variety of tests implies a lack of standards on the tests and consensus among institutions on what is considered "college-level" or "degree-credit" work.

Score Variation

The Abraham (1986) study also shows that, in terms of placement, variety itself does not necessarily imply a lack of standards or consensus among higher educational institutions on what constitutes college-level work. However, the study found that when combining the variety of tests with score variations on those same tests, it is conclusive that there is a lack of consensus among institutions regarding placement standards necessary to begin college-level/degree-credit work.

Remedial Programs and Retention

The second question addressed in this paper concerns the effectiveness of retaining students once they have been admitted and

TABLE 1

Distribution of Methods Used for Placement in Reading, Writing, and Mathematics

Placement Criterion	Reading		Writing		Mathematics	
	Number	Percent	Number	Percent	Number	Percent
No test used	36	8.9	29	7.2	25	6.2
Mandatory assessment and placement	173	42.8	176	43.6	191	47.3
Assessment and placement for specific programs/ courses	54	13.4	57	14.1	67	16.6
Assessment and placement for lack of high school course requirements	16	4.0	13	3.2	28	6.9
Assessment and placement for low scores on admission tests	132	32.7	140	34.7	123	30.4
Assessment and placement for low high school GPA	13	3.2	12	3.0	10	2.5
Assessment and placement for high school senior class rank	6	1.5	5	1.2	4	1.0
Student self-referral	140	34.7	135	33.4	138	34.2
Faculty referral	148	36.6	147	36.4	150	37.1
Other	47	11.6	48	11.9	50	12.4

NOTE: Each percent based on N = 404.

adequately placed according to the standards of the institution attended. Many studies have been conducted on the issues of student retention and progression through the higher educational system. Few of these studies, however, are specifically conducted in the area of remedial/developmental studies and their effectiveness. With minimal estimates of 30 percent of all entering college students in need of additional basic skills training, educational research and policy can no longer afford to ignore this issue.

Any discussion of retention is likely to be couched in a broader discussion of program effectiveness or evaluation. The SREB survey did not specifically address the issue of retention in remedial/developmental programs, but it did address program effectiveness/evaluations. Indicators of program effectiveness/evaluations are a useful means by which to gain insight into the issue of retention in remedial/developmental studies. Three indicators are taken from the remedial/developmental study and include: institutional follow-up studies, institutional evaluations, and comparative graduation rates of remedial/developmental students and non-remedial students.

A review of the literature reveals that, perhaps, more questions are raised by concerns for retention in remedial programs than there are answers. Only recently has adequate research begun to address the many questions associated with the effectiveness of remedial/developmental programs. Cross (1976) points out that most studies completed before 1960 showed generally positive results from remedial/developmental programs, but that most of these studies were poorly designed and administered. Research in the 1960s was emotionally charged and the focus was more on defending remedial/developmental programs for the "new students" entering higher education than for purposes for evaluation and effectiveness. It was not until the mid-1970s that research design and evaluation related to these programs improved.

Research in the 1980s has produced mixed results at best. For example, Maxwell's (1980) review of research indicated improved grades as a result of effective remedial/developmental studies. Evaluative studies of 60 programs by Kulik, Kulik, and Schwalb (1983) also concluded that remedial/developmental programs for underprepared students are generally worthwhile and that underprepared students earned somewhat better grades in regular courses and stayed in college slightly longer than students in control groups. However, Roueche, Baker, and Roueche's (1984) analysis of two major studies of postsecondary schools revealed that very few institutions evaluate or closely follow their developmental programs adequately; as such, it is difficult to fully estimate the impact or effectiveness of these programs on student retention or achievement.

More recently, numerous state, national, and commissioned studies have called for remedial/developmental program accountability. An October 1986 national conference on exemplary developmental programs paid particular attention to program effectiveness and evaluation.

When asked if their institutions conduct follow-up studies of students completing remedial/developmental programs, only 58.4 percent of the institutions reported any kind of follow-up studies conducted on a regular basis. More specifically, four-year institutions (67.9%) are more apt to conduct student follow-up studies than two-year institutions (52.8%).

In the SREB survey, institutions reported several ways in which they conduct evaluation of their remedial/developmental programs. Student and instructor evaluations were identified as two of the most popular means of evaluating remedial programs on a regular basis—62.6 percent and 52.0 percent, respectively (see Table 2). It is interesting that evaluation activities that are more closely related to the issue of retention in remedial programs are conducted by less than half of

TABLE 2

Distribution of Regularly Scheduled
Remedial/Developmental Program Evaluations

Types of Evaluation	Number	Percent
Student evaluations	253	62.6
Instructor evaluations	210	52.0
Rate of successful completion of remedial activity	190	47.0
General faculty surveys	38	9.4
Follow-up studies of academic success of students completing remedial activities	136	33.7
Studies of course or program effectiveness	122	30.2

NOTE: Each percent based on N = 404.

TABLE 3

Distribution of Remedial Versus
Nonremedial Student Graduation Rates

Remedial vs. Nonremedial Student Graduation Rates	Number	Percent
No basis for comparison	254	66.1
Much better	5	1.3
Better	32	8.3
About the same	57	14.8
Worse	31	8.1
Much Worse	5	1.3
Total	384	100.0

the institutions. For example, only 47.0 percent of the institutions reported that they regularly evaluated the rate of successful completion for remedial/developmental activities. Moreover, only about a third of the institutions (33.7%) included follow-up studies of later academic success for former remedial/developmental students as part of their programs' evaluation. Similarly, only 30.2 percent of the institutions reported that they conducted studies of course and/or program effectiveness on a regular basis.

The third indicator taken from the survey asked institutions to compare the graduation rate of remedial and nonremedial students (Table 3). Almost 70 percent of the institutions reported that they had no basis on which to make this determination. Over nine percent of the institutions reported their remedial student graduation rates as better than their nonremedial students. Also, over nine percent of the institutions reported their remedial student graduation rates to be worse than those of nonremedial students. Almost 15 percent reported that the graduation rates were about the same for the two groups of students.

Conclusion

Several issues concerning placement and retention are brought to light in this paper. First, it is clear that institutions use a variety of tests and variable test scores to place students into remedial/developmental programs. These activities are time-consuming and costly. By comparison, once students are admitted, institutions are less concerned with the type and effectiveness of treatment students receive in remedial/developmental programs. When nearly half of the institutions report that they do not follow-up remedial/developmental students on a regular schedule or in a systematic manner, many questions can be raised about whether higher education institutions are seriously concerned about preparing underprepared students for college-level work.

REFERENCES

Abraham, Ansley. College-Level Study: What Is It? *Issues in Higher Education*. Southern Regional Education Board, 1986, *22*.

Brier, Ellen. Bridging the Academic Preparation Gap: An Historical View. *Journal of Developmental Education*, 1984, *8*(1), 2-5.

Cross, K. Patricia, ed. *Accent on Learning*. San Francisco: Jossey-Bass, 1976.

Department of Education. Indicators of Education Status and Trends. Washington, DC: U.S. Government Printing Office, 1985, p. 14.

Kulik, Chen-Lin C., Kulik, James A., and Schwalk, Barbara J. College Programs for High-Risk and Disadvantaged Students: A Meta-Analysis of Findings. *Review of Educational Research*, Fall 1983, *53*, 397-414.

Maxwell, Martha. *Improving Student Learning Skills*. San Francisco: Jossey-Bass, 1980.

Morante, Edward A., Faskow, Shari, and Menditto, Irene. The New Jersey Basic Skills Assessment Program: Part II. *Journal of Developmental & Remedial Education*, Spring 1984, *7*, 6-9.

Roueche, John E., Baker, George A., and Roueche, Susanne D. *College Responses to Low-Achieving Students: A National Study*. Orlando, Florida: HBJ Media Systems, 1984.

FACTORS INFLUENCING RETENTION IN PRIVATE FOUR-YEAR COLLEGES

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The following is an overview of the analysis on the policies and programs which seemed to influence retention at higher education institutions in Georgia. This analysis was concluded in 1981. The primary focus of the paper is that part of the study which deals with the most significant factors influencing retention in four-year private colleges and universities.

The survey instrument was modeled after the one used by ACT/NCHEMS in the 1979 national study entitled, "What Works in Student Retention." The questionnaire solicited opinions from administrators, primarily in the academic and student affairs areas, at each of the 65 public and private colleges in the state. Of the 22 four-year private institutions surveyed, 86 percent responded.

Four objectives of the study were to identify and compare:

a. the status of campus concern with retention issues;

b. the factors contributing to or influencing student retention on these campuses.

c. the current policies, programs, and services implemented in a specific effort to increase student retention; and

d. the campus conditions important to the development and implementation of retention strategies.

Status of Concern with Retention

In the early 1980s, a substantial number of four-year private colleges demonstrated concern for retention issues on their campuses. More than 95 percent of these schools either had completed a retention study or were conducting one at the time of my survey. Most of the colleges sought opinions from currently enrolled students in these studies. Only about one-third of the institutions asked dropouts about their attitudes on retention efforts. Neither faculty, alumni, administrators, nor staff participated to any great extent in the retention surveys.

Other than these analytical studies, few private colleges used any additional resources in planning or evaluating their efforts to retain students. While private institutions employed off-campus consultants somewhat more often than schools in other sectors, the planning and evaluation of retention strategies was primarily an "in-house" operation.

As was true nationally, four-year colleges in Georgia retained a higher percentage of students until their senior year than did public schools.

Factors Contributing to Student Retention

Several campus characteristics and student traits appeared to influence retention to a greater extent in some institutional sectors than they did in others. Private colleges and universities ranked the lack of diverse extracurricular activities as the primary campus characteristic contributing to attrition. These institutions also considered the existence of restrictive rules governing student behavior a greater negative factor in the retention process than did public colleges.

Private college administrators viewed the campus characteristic "personal interest of faculty and staff in students" as more important to student retention than did administrators at public schools. The other two campus characteristics contributing most to retention efforts were a consistent high quality of teaching and adequate student financial aid. Administrators in the private sector also believed that encouraging student

involvement in the total campus experience was a positive retention strategy.

National research studies suggest that certain characteristics students bring with them to the college experience can slow their progress of involvement in campus activities. Overwhelmingly, institutions in the private sector in Georgia stated that low academic achievers had the highest chance of withdrawing before graduation. On the other hand, most administrators agreed that a low to below average relationship existed between a student's commuter status and his potential for dropping out.

Current Policies, Programs, and Services

The effectiveness of college policies, academic programs, and student services recently implemented to improve retention did not differ substantially by institutional sector or level. Several four-year private colleges, however, did attempt to reduce the potential negative influence of certain student characteristics by developing specific programs designed to improve their campuses' retention capabilities.

A preponderance of these institutions organized some system for identifying and communicating with potential dropouts early in the students' program. These "early warning systems," which were much less common in public institutions, were rated as having only a moderate effect upon retention rates, however.

While private schools saw academic advising as substantially more important to student retention than did public schools, less than one-third of the private institutions had a formal policy which required the inclusion of advising effectiveness into faculty promotion and tenure decisions. However, almost 80 percent of the private schools reported recent improvements in their academic advising programs as the most frequent strategy for increasing student retention. Among these improvements were the employment of students as peer advisors, counselors, or tutors.

Few institutions in the private sector conducted orientation classes for credit, but those that did rated these classes as one of the three most successful retention efforts. The other two were improvements in academic advising and the use of students as tutors, counselors, and peer advisors.

The final category of retention activities evaluated in this study was the area of student services. These services as a whole consistently received higher marks across all sectors than did specific institutional policies or programs. Because these services provide students opportunities for increased personal contact with college staff and faculty, students may develop a higher level of integration with the institution and thereby persist longer.

Much has been written in the last decade concerning the theory of social integration and its influence on retention. In my study, a larger percentage of private institutions indicated that a "good fit" between the student and the institution was a positive factor in their retention efforts. More than any other sector, private colleges agreed that special admissions materials which accurately communicated the school's environment and value system enhanced student-institutional congruency or that "fit" between the student and the college.

Private colleges regarded existing job-related training programs and expanded career planning services as moderately effective in increasing retention rates. Services for adult learners and minority students were rated as only somewhat helpful.

Private schools aimed their retention activities less frequently than did public colleges at commuter students and at high-risk students. Thus, in private institutions, retention strategies were designed to a lesser extent for low academic performers or students with skill deficiencies. In addition, most of these colleges apparently overlooked the special needs of minority students and adult learners in planning their retention activities.

Conditions Important for Successful Retention Efforts

Less agreement existed among institutions in the private sector on the conditions important for successful retention efforts. Keeping this widespread response rate in mind, opinions of administrators at private colleges did seem to suggest, however, that the primary condition necessary for retention programs was the acceptance of policy changes by the faculty. This condition was followed closely by the active support and participation of administrators themselves along with their own execution of new roles and responsibilities. Equally as important as the administrators' acceptance of new roles was the students' acceptance of institutional policy changes and the faculties' acceptance of new responsibilities. Obviously, faculty and administrators wore many hats in carrying out campus retention strategies at private institutions.

The overall evaluation of total campus retention efforts at private four-year colleges was less than positive. Almost 88 percent of the colleges and universities ranked the success of their retention programs in the little to moderately effective range.

Summary

While private institutions in Georgia did exhibit some concern in the early 1980s for improving student retention, their planning efforts focused primarily upon the opinions of currently enrolled students rather than upon students who had already withdrawn, or upon alumni, faculty, or staff. Campus conditions most likely to contribute to a student's decision to withdraw included scheduling conflicts between classes and job responsibilities, inadequate academic advising, and poor counseling.

The three campus characteristics with the greatest positive influence on retention appeared to be the personal interest of faculty and staff in students, a consistent high quality of instruction, and adequate student financial aid.

All institutions generally agreed that low academic achievers and students with limited educational aspirations had a high probability of withdrawing from private colleges. Therefore, the most frequently implemented retention strategy in this sector was the improvement of academic advising. In addition, administrators at private colleges viewed the acceptance of policy changes by faculty as the most critical campus condition for successful retention efforts.

Conclusions

The major findings of this study indicate that, in the early 1980s, many four-year private colleges in Georgia were not only concerned about student retention, but also began revitalizing their student services and academic advising programs in order to improve their retention capabilities. Most of these institutions apparently allocated adequate financial resources, sufficient personnel, and ample time for planning and evaluating their retention strategies since these factors were not seen as very significant for successful implementation. The acceptance of policy changes by faculty and the active support and participation from administrators were viewed as the most significant factors in the successful implementation of these activities.

This study also suggests that institutional policies at private schools which facilitate personal contact between students and faculty, reward a consistent high quality of teaching, and provide adequate student financial aid have a positive impact upon student retention.

Student retention rates can be increased substantially if private institutions are committed to a more critical examination of the educational and personal needs of their students as well as the college's own mission, procedures, and behaviors. To increase retention rates, each private four-year college

should evaluate its own policies, programs, and services to determine which ones require revision in order to provide all students a higher quality and a more personal educational experience. Greater increases in retention can result from a campuswide organization and commitment to the delivery of quality academic and support services to students.

RETENTION PROGRAMS THAT WORK IN PRIVATE TWO-YEAR COLLEGES

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Truett-McConnell College

As we look today at the problem of retention, it was about 27 years ago that I accepted my first position as a college administrator in a private four-year college. Since then I have been concerned about how to get students, how to keep them, and what to do with them in between. When I became the executive vice president and academic dean of a four-year college, one of my charges was to upgrade the college academically. I was told by the board that it was also necessary that the college increase student enrollment in order that we might pay our bills a little faster. We were able to recruit more students and we enrolled 200 more freshmen each year. We required each student to take an orientation program during fall quarter. We thought they were happy.

The president of that college was a traveling man who did what most private college presidents do to survive, and that is to go out and beg for money to keep us open, so he was gone most of the time. But that first year, I noticed that he came back on campus sometime just before the Thanksgiving feast and he was there through Christmas. Suddenly in January when we started school again, we were missing about 50 percent of our students. This happened again the following year. So I said, "Well, something is happening here. We had them happy, the president came in and made them unhappy." When I found the courage, I went to the president and very politely talked with him. I said, "You know, we really have a problem." He said, "Dean, what is the problem?" Well, I wanted to say, "You are the problem," but I could not really say that at the time. I did say it a few years later and then went looking for another job. But I said to him, "In handling and working with these college students, there are certain things that we must do. We are bringing in some very good students and we are losing a lot of them." Then I pointed out a few things: he would go around the campus and if a student dropped a coke bottle in the wrong place, the student spent thirty minutes listening to the president tell him first how terrible it was to drink Coca Cola—although we had about 50 machines on campus—and then all of the other things regarding soft drinks and disposing of the bottles properly. He looked at me, smiled, and said, "Dean, we are going to operate this college whether we have a student or not." I looked at him and I said, "For what?" So, I was first to confront him with the situation, and I said to myself, "If I should ever become president, I will never make that mistake."

I became a president and I made that mistake. I would love to have operated a school many times without any students. But you cannot do that and pay the bills, you have to work with students. As someone who has served as president and vice president, I know that if you do not have support from the top, then you are going to have a problem at the bottom in keeping students on a small college campus. You really cannot do it without the involvement of the president and other administrators.

My comments here will be rather pragmatic, but I will tell you some of the things that we did, some of the things that worked, and some of the reasons why I think they worked. Since the University of Georgia is my alma mater, I know the University quite well. I have always felt a friendly atmosphere here, and it has good leadership. For the 14 years that I was just 60 miles up the road, this University received more of our graduates than other college in the state. Therefore, I am familiar with the University's activities and its atmosphere. Some of the same principles of retention that apply to small college situations certainly apply to any college or university.

One thing I would mention is the old saying,"first impressions are lasting," which is very true. If you do not make some type of positive impression on the students within the first two weeks of their arrival on campus, you are going to have a hard time doing it in April. When students come to the campus they are very emotional because they are away from home. They are susceptible to frequent illnesses, especially when class time comes. Sometimes as a young person I used to laugh at that, but they are frequently sick and become easily upset. Some of the problems that we perceive to be little, to them are mountains larger than anything that can be conceived. Later, after they settle in a bit, students begin to see things differently. The first two weeks are the most crucial in preventing problems that could otherwise develop later in the year.

We also need to remind ourselves while in the college environment and in dealing with retention, recruiting, and anything else that involves the human element, we live in what is called an aspirin society. When we have a headache we do not bother to find out why we have a headache, we just take an aspirin. The next day that same headache returns and we take another aspirin. We in education sometimes forget the universal law of cause and effect. The law being that when there is a condition, there is a cause. Sometimes we treat the condition and do not consider the cause. I have counseled with many small private colleges with serious financial problems. They want an immediate solution without looking for causes of their problems. If a millionnaire would give them five million dollars, it would be wonderful. But within three years they would again have those same financial difficulties because they had not solved the original problems. In education, we must look behind the condition or effect to the cause. We must do the same thing in retention.

I became president of a small college where we needed students. We dealt with problem by using three pragmatic approaches. First, we had to find out why they came to our college. What did the recruiters tell them? How many of you really know what the recruiters tell applicants about your college? I had a certain recruiter who would travel through Florida and convince everyone there that we had snow all the time in Cleveland, Georgia. We were in a beautiful part of the mountains and we did get a small amount of snow. Honestly, we had quite a few students from Florida, but when we did not get the snow, we had real problems. Although snow is something that the president of the college cannot control, I did have a student group come to me and suggest that we consider buying a snow machine from one of the resorts in the mountains. What are your recruiters telling about your college?

Secondly, what do your publications tell them? How many of you spend enough time reading and familiarizing yourself with them? When a student realizes what he or she reads in the catalog contradicts the way things actually are, you have a real problem.

Finally, what was the deciding factor that brought the student to your campus? When I arrived on campus as the new president, I talked with many students to find out why they had chosen to attend Truett-McConnell. The answers varied drastically so we had to sift through them. Some students came to see snow, some came because they had a boyfriend or a girlfriend attending the college. We found that many had come because of what the recruiters had said and because of the location, the cost, and the friends they had there. We found that some came because we were associated with a religious denomination, and believe it or not, we had a lot of students come because we have regulations. Now, some of you may think that is strange, but some of the best colleges and fastest growing colleges are those which expect decent behavior from students. And, students will try their best to live up to your expectations of them. The expectations of others will many times determine the success of students and their willingness to learn. You must make your expectations known.

One reponse that bothered me was that we did not find many students who came for the academics. I realized we were losing a lot of students because we were not known for academics. We had to make up our minds as to why we were in business. Before you can make decisions on retention, you must decide what your purpose is as an institution. How are you portraying your school and whom are you recruiting? Realizing that not everyone should stay once they have arrived, there are some students who need to leave. I have referred students to the University of Georgia, North Georgia College, Gainesville Junior College, and to many other places. I did that because it was evident that Truett-McConnell did not have what they were looking for in a college. If your recruiters understand what the purpose of your college is, chances are you can obtain a higher retention rate. But if you are not being selective in your recruiting, and you have a college with unclear purposes, you retention rate will be much lower.

Next, we had the problem of why were they leaving. A national retention study in 1979 indicated some of the reasons for dissatisfaction and some of the causes for satisfaction. Some of the negative factors in students' decisions to leave were: inadequate academic advising, inadequate curricular offerings, conflicts experienced by those who had jobs, inadequate financial aid, inadequate counseling and support systems, and inadequate extracurricular offerings. They also found the most positive factor to be the caring attitude shown by the faculty and staff and people at the college who are involved with students. High quality teaching means that a student who makes some progress will be happy and, therefore, will have a tendency to want to stay longer than a student who can not make progress. Other positive factors include adequate financial aid, student involvement in campus life, and high quality advising.

Why did they leave? Every time someone left, if possible, we had an exit interview. If we were unable to get the interview before leaving the college, as president of the college, I would try to contact them through every possible means. I would sit down in the living room and talk with the student and his or her parents. I said to them, "What did we do?" And in that way, I would get a candid answer.

Poor advising which placed students in classes that they should not have been in caused some to leave. Program and curriculum offerings was a problem because we did not have the courses they wanted. And again, the cause was bad recruiting. The one thing that you must insist upon in the recruitment of a student is honesty on the part of those recruiting. Whether recruiters, the president, dean, or friends, you must insist they be honest about your college. If your college cannot offer students what they want, under no circumstances indicate that you can. At the University of Georgia one may have one dissatisfied student among 20,000 or 30,000 and yet not have much of a ripple. But in a small college with 400 to 800 students, the ripple effect is great.

At Truett-McConnell we improved our academic advisement program by assigning only faculty who were interested in advising. In the past, we did not assign students indiscriminately to faculty, but we did require all faculty to advise. We began offering intense training for the faculty that were interested in academic advisement. That was one of the best things we did as it definitely reduced our withdrawals.

We also put into action a systematic and periodic review of our curriculum offerings. This keeps an even balance between the courses offered and those in greatest and least demand.

We also tried to identify for our recruiters the students that they had brought to the campus and hold the recruiters accountable to the students for two quarters. They met and talked with those students every time they were on campus. You would not believe what that did for the students, to know that the recruiter wanted to find out how they were doing.

Another change I made as president was to have regular staff meetings with everyone who worked at the college and had direct contact with the students. Do you realize that most of the conversations the students have are with secretarial and clerical personnel, not with faculty? I had a staff member who was very personable and warm toward people but students and parents complained that they were not allowed to speak with him. I found that hard to believe until I found that his secretary was turning people away and not allowing them personal contact with the staff member. By involving everyone who had personal contact with the students in the retention process, they understood how important they were in the effort to retain more students.

Another reason often cited for leaving was financial aid. Yet we had a policy that no student would ever be turned down from Truett-McConnell because of money and, to the best of my knowledge, in fourteen years that never happened. I would ask students two questions: Do you want to go to college? Are you willing to work? Now, I cannot do much with someone who is not willing to work.

Let me conclude by saying that to retain students, the development of a personal relationship with the student is of paramount importance. Even in a large university, there has to be some type of personal contact. As we work on the problem of retention we should remember that students want to know that they are wanted, and that someone is concerned with their individual problems. Everyone up and down the ladder of command should be involved. As we work with students in a small college setting, we can become more intimate and more personal. That is our "trump card" in the game of retention.

RATES OF STUDENT RETENTION IN DeKALB TECH PROGRAMS

Berman E. Johnson
DeKalb Area Technical School

The purpose of this study was to describe the rates of student retention in the programs at DeKalb Area Technical School. The study pinpointed student retention rates for DeKalb Tech's vocational-technical programs by following students from application through graduation/completion. Since student retention is crucial to institutional stability, the study sought to reveal areas where faculty, administrators, and staff could take action to improve the academic persistence of students.

Unlike "The DeKalb Tech Retention Study" (Johnson, 1985) which focused upon the reasons for the lack of retention, this study focused upon percentage rates of applicants and students in the matriculation process. It identified four basic stages where student retention is important: application, acceptance, enrollment, and graduation/competion. Since all applicants and students pass through one or more of these stages, the study identified areas related to the stages where retention rates appear to be problematic. Although student retention rates differ for each program, it was felt that this study could determine where program resources could be allocated and concentrated more effectively.

Statement of the Problem

Each year a large number of persons apply at DeKalb Tech while a smaller number complete a program of study. Program entry requirements, dual enrollment at DeKalb College, and varying program standards influence these numbers. Also, factors such as program switching, developmental studies requirements, course scheduling, and student dropout influence timely program completions.

DeKalb Tech faculty, administrators, and staff were concerned that a failure to retain students presents a threat to academically sound programs which are needed to serve critical areas of employment. It was felt that identifying where students fail to persist could be helpful to marketing, student recruitment, student counseling, program improvement, and other areas important for institutional growth and stability.

The study posed the following basic question: What are the retention rates of applicants and students who are scheduled to progress through the four basic stages of DeKalb Tech programs? The study was limited to applicants and students in full-time day programs during the ten-quarter period between January 2, 1984 to June 6, 1986.

Application in this study is defined as the proper submission of an application form to DeKalb Tech Admissions. During the implementation of this study, there was no application fee and applications could be submitted at four campus locations.

Acceptance in a DeKalb Tech program indicates that the applicant has met all the entry requirements for a selected program. It does not include acceptance in DeKalb Tech options such as the Evening Program, developmental studies, pre-technical courses, the Occupational Resource Center, Adult General Education, or other important short-term studies.

Enrollment is defined as student registration in one or more courses in a DeKalb Tech full-time day program.

Graduation describes the satisfactory fulfillment of program requirements which lead to a diploma or a degree. Completion describes conditions wherein an enrolled student is job-placed before fulfilling the program requirements. Therefore, graduation/competion describes program leavers who are job-ready by virtue of academic credentials or employer selection.

Review of Related Literature

Most recorded retention studies in postsecondary institutions attempt to provide reasons why students are not retained. Job conflicts were the most often cited reason found in "The DeKalb Tech Retention Study" (Johnson, 1985). The results showed that a large portion of DeKalb Tech students have part-time and full-time job commitments. It was recommended that better marketing techniques, more personalized student services, and flexible course schedules be established to attract as well as to retain students who work.

It appears that the most productive efforts in retention will be made while students are still in school. Marin Community College conducted a study to determine whether direct mail and telephone contacts with dropouts could have a positive effect on the student return rate (Stetson, 1984). The study treated four dropout groups: one which received a letter and a telephone call encouraging their return, a second which received telephone calls only, a third which received letters only, and a fourth which was not contacted at all. The findings showed that direct mail and telephone contacts with student dropouts had no significant effect on the student rate of return to the institution.

Faced with low rates of retention, Santa Barbara City College established a committee to assess the effectiveness of its support services. The committee recommended: (a) assessment of students enrolled in reading, writing, ESL, and certain mathematics courses; (b) group advisement for new students prior to registration; (c) early warning and coordination of support services; (d) the development of activities and programs to improve the match between institutional goals and the needs and expectations of students; and (e) the development of honors courses. It was found that retention rates were increased after the implementation of the recommendations (Cohen, 1984).

Nespor and Roueche (1983) contend that studying scholastic probation is a legitimate alternative to studying student retention. They conducted a mini-study of attrition, probation, and literacy at The University of Texas at Austin. It was found that students on academic probation frequently enroll in courses without completing the prerequisites, they overly represent the minority populations, and they frequently are not aware of the academic implications of their status. Nespor and Rouche concluded that major factors which should be considered are (a) the academic reasons for which students dropout or are suspended, (b) the institutional definitions of attrition, and (c) the procedures used to monitor the success or failure of students.

The related literature disclosed no studies which dealt with retention rates of applicants and students as they progressed through the basic stages associated with programs in the matriculation process. However, in personal contacts the investigator found that such studies are sometimes conducted in institutions at the department or division level without benefit of publication. It appears that the results of these studies are deemed important for decision-making but are not readily shared with other institutions.

Methodology

The study required applicant and student data from several DeKalb Tech sources. The Records Office supplied applicant data, the Admissions Office supplied acceptance data, and the Administrative Computing Center supplied enrollment and graduation data. Each source provided the names and social

security numbers of persons who were classified in one of the four basic stages during the limitations of this study.

The sample reflected applicants to DeKalb Tech programs since January 2, 1984 who were identified with program schedules which could be completed by June 6, 1986. Persons who applied before January 2, 1984, although they may have progressed through one or more of the four basic stages during the limitations of this study, were not included in the sample. These parameters limited the sample to 5,592 persons, a number reflecting less than one-fourth of those who were classified in one of the four basic stages during the ten-quarter period. Also, these parameters generated sample portions which varied by program and by stage.

Data for the applicants and students were entered into the IBM Computer utilizing the statistical package of LOTUS 1-2-3. For each program, percentages were extracted which reflected student retention rates for the following four areas:

Area One: From Application to Acceptance

Area Two: From Acceptance to Enrollment.

Area Three: From Enrollment to Graduation/Completion.

Area Four: From Application to Graduation/Completion.

Results and Discussion

Student retention rate percentages in this study are described for 30 DeKalb Tech programs and are shown in Tables 1 through 5. Table 1 indicates the retention rate percentages of DeKalb Tech applicants for Area One: from Application to Acceptance. It also indicates the program length and the original sample portion for each program. These sample portions are the program groups that were identified and followed through the four basic stages. For example, it can be seen that during this study 127 persons applied in the Accounting Technology Program and 60 percent were accepted. It can also be seen that in the Emergency Medical Technology Program 219 persons applied and 39 percent were accepted. In all programs, 47 percent of those who applied were accepted while the remaining 53 percent were referred to other DeKalb Tech options.

Table 2 indicates retention rate percentages for Area Two: from Acceptance to Enrollment. It can be seen that the 60 percent student retention rate previously described in the Accounting Technology Program example now indicates a reflective sample portion of 76. Also, the 39 percent student retention rate previously shown in the Emergency Medical Technology Program example now indicates a reflective sample portion of 85. These examples show that there were 76 persons who were accepted into the Accounting Technology Program and 85 in the Emergency Medical Technology Program, and their retention rate percentages leading to enrollment were 72 percent and 91 percent respectively. In all programs, 76 percent of the sample who were accepted subsequently registered for enrollment.

Table 3 indicates retention rates for Area Three: from Enrollment to Graduation/Completion. It also indicates the number of graduation/completions in this study. The examples described in Tables 1 and 2 now show that there were 55 persons who enrolled in the Accounting Technology Program and 77 in the Emergency Medical Technology Program. It also shows that 69 percent and 100 percent respectively accomplished graduation/completion. In all programs, 58 percent of the sample who enrolled accomplished graduation/completion.

Table 4 provides program retention rates for Area Four: from Application to Graduation/Completion, the area which includes all the basic stages of matriculation. It

Table 1

Area One: Student Retention Rates From Application To Acceptance

Program Name	Program Length (qtrs.)	Sample Portion	Retention Rate Percentage
Acccounting Technology	4	127	60
Automotive Technology/Auto Mechanic	4, 6, & 7	338	66
Commercial Art	4	135	57
Cosmetology	4	492	41
Data Processing Operations	2.5	288	67
Data Processing Technology	6	754	23
Diesel Truck Maintenance	4	55	56
Drafting	4	193	55
Early Childhood Paraprofessional	4	222	46
Electromechanical Engineering Technology	6	127	13
Electronics Engineering Technology	6	206	32
Electronics Maintenance Technology	6	102	84
Emergency Medical Technology	2	219	39
Executive Secretary	4	83	61
Heating, Refrigeration & Air Conditioning	4 & 6	272	69
Legal Secretary	2.5	64	50
Machine Tool Operation	4	108	80
Mechanical Engineering Technology	6	51	24
Medical Lab Technology	8	107	29
Medical Office Assistant	4	110	61
Medical Secretary/Transcriptionist	2.5	51	33
Offset Printing	4	128	65
Opthalmic Dispensing	6	105	54
Phlebotomy Technician	1.5	81	67
Practical Nursing	4	495	39
Radio & TV Servicing	4	160	59
Secretarial Program	4	159	61
Surgical Technology	4	127	35
Welding	4 & 6	106	60
Word Processing	2.5	127	32
All Programs		5,592	47

Table 2

Area Two: Student Retention Rates From Acceptance To Enrollment

Program Name	Sample Portion	Retention Rate Percentage
Accounting Technology	76	72
Automotive Technology/Auto Mechanic	223	74
Commercial Art	77	88
Cosmetology	202	71
Data Processing Operations	193	77
Data Processing Technology	173	50
Diesel Truck Maintenance	31	90
Drafting	106	66
Early Childhood Paraprofessional	102	85
Electromechanical Engineering Technology	17	31
Electronics Engineering Technology	66	94
Electronics Maintenance Technology	86	71
Emergency Medical Technology	85	91
Executive Secretary	51	71
Heating, Refrigeration & Air Conditioning	187	79
Legal Secretary	32	97
Machine Tool Operation	86	90
Mechanical Engineering Technology	12	67
Medical Lab Technology	31	83
Medical Office Assistant	67	69
Medical Secretary/Transcriptionist	17	100
Offset Printing	83	78
Opthalmic Dispensing	57	84
Phlebotomy Technician	54	81
Practical Nursing	193	75
Radio & TV Servicing	94	72
Secretarial Program	97	70
Surgical Technology	44	91
Welding	64	81
Word Processing	41	98
All Programs	2,647	76

Table 3

Area Three: Student Retention Rates From Enrollment To Graduation/Completion

Program Name	Sample Portion	Graduation/ Completion	Retention Rate Percentage
Accounting Technology	55	38	69
Automotive Technology/Auto Mechanic	164	79	48
Commercial Art	68	41	60
Cosmetology	143	96	66
Data Processing Operations	149	99	66
Data Processing Technology	87	20	24
Diesel Truck Maintenance	28	22	79
Drafting	71	29	41
Early Childhood Paraprofessional	88	53	60
Electromechanical Engineering Technology	5	1	20
Electronics Engineering Technology	62	19	31
Electronics Maintenance Technology	61	13	21
Emergency Medical Technology	77	77	100
Executive Secretary	36	29	81
Heating, Refrigeration & Air Conditioning	148	100	68
Legal Secretary	31	16	52
Machine Tool Operation	77	46	60
Mechanical Engineering Technology	8	1	13
Medical Lab Technology	26	17	65
Medical Office Assistant	46	36	78
Medical Secretary/Transcriptionist	17	12	71
Offset Printing	65	28	43
Opthalmic Dispensing	48	29	60
Phlebotomy Technician	44	36	82
Practical Nursing	145	91	63
Radio & TV Servicing	68	17	25
Secretarial Program	69	31	45
Surgical Technology	41	28	68
Welding	52	21	40
Word Processing	40	37	93
All Programs	2,020	1,162	58

Table 4

Area Four: Student Retention Rates From Application To Graduation/Completion

Program Name	Sample Portion	Graduation/ Completion	Retention Rate Percentage
Accounting Technology	127	38	30
Automotive Technology/Auto Mechanic	338	79	23
Commercial Art	135	41	30
Cosmetology	492	96	20
Data Processing Operations	288	99	34
Data Processing Technology	754	20	3
Diesel Truck Maintenance	55	22	40
Drafting	193	29	15
Early Childhood Paraprofessional	222	53	24
Electromechanical Engineering Technology	127	1	1
Electronics Engineering Technology	206	19	9
Electronics Maintenance Technology	102	13	13
Emergency Medical Technology	219	77	35
Executive Secretary	83	29	35
Heating, Refrigeration & Air Conditioning	272	100	37
Legal Secretary	64	16	25
Machine Tool Operation	108	46	43
Mechanical Engineering Technology	51	1	2
Medical Lab Technology	107	17	16
Medical Office Assistant	110	36	33
Medical Secretary/Transcriptionist	51	12	24
Offset Printing	128	28	22
Opthalmic Dispensing	105	29	28
Phlebotomy Technician	81	36	44
Practical Nursing	495	91	18
Radio & TV Servicing	160	17	11
Secretarial Program	159	31	19
Surgical Technology	127	28	22
Welding	106	21	20
Word Processing	127	37	29
All Programs	5,592	1,162	21

Table 5

Student Retention Rates For Areas One, Two, Three, and Four

Program Name	Retention Rate Percentages Area One	Area Two	Area Three	Area Four
Accounting Technology	60	72	69	30
Automotive Tech./Auto Mech.	66	74	48	23
Commercial Art	57	88	60	30
Cosmetology	41	71	66	20
Data Processing Operations	67	77	66	34
Data Processing Technology	23	50	24	3
Diesel Truck Maintenance	56	90	79	40
Drafting	55	66	41	15
Early Childhood Parapro.	46	85	60	24
Electromechanical Eng. Tech.	13	31	20	1
Electronics Engineering Tech.	32	94	31	9
Electronics Maintenance Tech.	84	71	21	13
Emergency Medical Tech.	39	91	99	35
Executive Secretary	61	71	81	35
Heating, Ref. & A/C	69	79	68	37
Legal Secretary	50	97	52	25
Machine Tool Operation	80	90	60	43
Mechanical Eng. Tech.	24	67	13	2
Medical Lab Technology	29	83	65	16
Medical Office Assistant	61	69	78	33
Medical Secretary/Trans.	33	100	71	24
Offset Printing	65	78	43	22
Opthalmic Dispensing	54	84	60	28
Phlebotomy Technician	67	81	82	44
Practical Nursing	39	75	63	18
Radio & TV Servicing	59	72	25	11
Secretarial Program	61	70	45	19
Surgical Technology	35	91	68	22
Welding	60	81	40	20
Word Processing	32	98	93	29
All Programs	47	76	58	21

can be seen that 30 percent of those who applied in the Accounting Technology Program and 35 percent of those who applied in the Emergency Medical Technology Program completed the cycle to accomplish graduation/completion. In all programs, 21 percent of the sample accomplished graduation/completion during the limitations of this study.

In Table 4 it appears that programs which compete for enrollment with other institutions have lower rates of retention. Notable among these are the Data Processing Technology Program and the engineering technology programs with complete cycle retention rates of only 3, 1, 9, and 2 percent respectively. Higher entry requirements as well as level of program difficulty may contribute to this condition. It also suggests that students take longer to complete some programs and may require wider course options.

Table 5 provides a composite view of the retention rates.

Conclusions and Recommendations

The student retention rate percentages found in this study reflect student traits and curriculum structure peculiar to DeKalb Tech. However, they are symptomatic of conditions which can be found in most vocational-technical schools in Georgia. The findings therefore have statewide as well as local implications.

Low student retention rates found in some areas of this study should not be construed as program deficiencies. The sample limitations of the study, type of program, frequency of program starts, and frequency program offerings are factors which should be considered. Therefore, program by program comparisions of student retention rate percentages can be misleading, and each program should be evaluated individually. Since the data were generated during a ten-quarter period when student retention appeared to be most problematic, a careful examination of the percentage rates can provide valuable insight to problems which deter students from gainful academic persistence.

DeKalb Tech's new status as a degree-granting institution may require a different approach in the academic community. DeKalb Tech's program of studies could better accommodate students who want to pursue a credential while attending classes two or three days per week during the mornings, afternoons, evenings, and on Saturdays. Such innovations will require a course-based rather than a program-based curriculum. It will also require a re-orientation to course scheduling, a re-definition of the full-time student, and a revision of student follow-up procedures. With these innovations alone, DeKalb Tech's program of studies will begin to look more like that of a two-year collegiate institution.

The findings suggest that many DeKalb Tech students take longer than the scheduled program lengths to complete their studies. It appears to be common for a student to temporarily drop out or to take a lighter load for one or more quarters and then resume a pace towards program completion. It is recommended that DeKalb Tech provide conditions which better accommodate students who desire longer or less structured periods of matriculation. Such conditions could include the development of: (a) more multiple program starts, (b) more multiple program course offerings, (c) more individualized instructional programs, (d) more courses with content and standards which meet the needs of several programs, and (e) more course offerings during the evenings and on Saturdays which satisfy degree and diploma requirements.

It is recommended that DeKalb Tech move towards a better coordinated day-evening merger which: (a) recognizes the full potential of both efforts in providing credentials, (b) eliminates any credit differences between day and evening courses which have the same content, and (c) establishes the

program of studies as a continuous 7:00 a.m. to 10:00 p.m. six day per week activity. It is recognized that such innovations may require input from state authorities. However, such a merger may be necessary if the tech schools in Georgia are to successfully compete for student enrollment and student retention in a market which has become increasingly complex.

It is recommended that DeKalb Tech establish an on-going system which electronically captures student retention data on a quarterly basis. In so doing, student retention rates can be observed regularly without engaging in the time-consuming methods used in this study.

Finally, it is recommended that Tech faculty, administrators, and staff carefully consider the student retention rates found in this study. Faculty members should study the specific retention rates related to their programs and determine appropriate action which should be taken to increase the percentages. Since DeKalb Tech programs differ in length, content, and student attraction, action which can be beneficial may vary by program as well as by stage. Administrators should consider the retention rates in their more global perspectives in order to generate further curriculum innovations. Student Services personnel should consider the retention rates in their recruitment, counseling, and advisement efforts, and take action where it can facilitate the academic persistence of students.

Together, faculty, administrators, and staff are charged to establish and to maintain a rewarding social, psychological, and educational environment which delivers high quality instruction for students. This study sought to determine how well DeKalb Tech retained students in that commitment. If DeKalb Tech is to continue serving the needs of its constituents and to continue providing growth and development for their economic well-being, the institution must meet this most profound educational challenge of our times.

REFERENCES

Cohen, E. L. *Assessment, advising and early warning: Strategies for improving retention*. Santa Barbara, CA: Santa Barbara City College, 1984. (ERIC Document Reproduction Service No. ED 243 550)

Johnson, B. E. The DeKalb Tech retention study. *Higher Education in Georgia: Research Needs and Uses in Administration, Proceedings of the 1984 Conference*, Athens: The University of Georgia, Institutional Research and Planning, 1985.

Nespor, J.K. and Roueche, S. D. *Studying attrition by studying probation*. Austin: The University of Texas, 1983. (ERIC Document Reproduction Service No. ED 237 181)

Stetson, N.E. *The effect of direct mail and telephone contacts on the rate of return of students who dropped out*. Fort Lauderdale, FL: Nova University, 1984. (ERIC Document Reproduction Service No. ED 253 286)

RETENTION ISSUES IN MEDICAL AND HEALTH EDUCATION: THE ACADEMIC HEALTH CENTER

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Retention is a major concern in health professions educational institutions, just as in other postsecondary schools, although attrition rates are sometimes lower. At the Medical College of Georgia, from the fall of 1982 to the fall of 1983, overall retention of the student population examined for the University System of Georgia's retention study program was 89.9 percent. For 1983-84, the rate dropped to 87.8 percent, but rose to 93.75 percent for 1984-85, the latest year studied. During this three-year period, retention rates for black students rose from 77.8 to 85.7 percent. At the same time, enrollment of black students increased.

In common with similar academic health centers, the Medical College of Georgia (MCG) enjoys several characteristics that have been shown to be related to retention. These include:

1. Being a special purpose institution with a clearly defined mission (Lenning, Beal and Sauer, 1980).

2. Enrolling a large proportion of students with high aspiration levels (Lenning, Beal and Sauer, 1980). Approximately 52 percent of MCG's students are either at the doctoral level or are studying to become physicians or dentists.

3. Having few "special" or transient students who likely have little intention of persisting. Less than one-half of one percent of MCG's students fit into this category. Therefore, nearly every student is admitted directly into a program. There are no "undecided" students—who may be more subject to attrition (Astin, 1975).

4. Having a majority of entering students either complete undergraduate degrees elsewhere prior to entry, or transfer in from other schools. At MCG, more than 95 percent enter after having successfully completed some collegiate work elsewhere.

   Further, 94.5 percent of MCG's degree- or certificate-seeking students are at the (undergraduate) junior level or above. Since attrition is typically higher at the younger levels (Lenning, Beal and Sauer, 1980), having few such students obviously allows for higher retention.

On the other hand, we at MCG do not enjoy other characteristics that may facilitate retention. We are neither a private institution, nor are we high-cost. We have few extracurricular activities, such as extramural sports teams, Greek organizations and so forth. Only about 25 percent of our students reside on campus (though student demand for housing typically does not exceed supply to any real extent). Some studies have found such characteristics to be associated with higher attrition (Astin, 1980; Lenning, Beal and Sauer, 1980).

What Strategies Are Effective?

In preparation for discussing retention issues in educational programs such as ours, I interviewed representatives from each of the four MCG schools offering health professions education: Allied Health Sciences, Denistry, Medicine, and Nursing. Each representative is actively involved in retention-related activities and could address retention strategies from both a current and historical perspective. Table 1 presents an overview of some of the strategies in use at the present time that are perceived by the various representatives as being particularly important and/or effective in retaining students.

Some comments concerning Table 1, may be in order. First, there is clear recognition that retention and admissions are interrelated. Schools that use an extensive interview program believe that doing so not only helps them make decisions about whom to admit, but also helps applicants learn about the programs and assess the degree of "match" between MCG and their own goals and needs. The interview system is one expression of these Schools' philosophy that, "If we admit you, we expect to graduate you."

Second, most programs are still designed for full-time students, and are essentially "lock-step." Typically, each course is offered only once each year. Decelerated curricula require considerable extra effort on the part of faculty (often, on a one-to-one basis), plus careful advisement from program administrators. At present, such arrangements are available on a very limited basis.

Third, the strategies appearing in Table 1 do not represent a comprehensive list. For example, financial aid was not mentioned, although the services of MCG's Office of Financial Aid are widely viewed by both faculty and students as highly effective. MCG's Office of Minority Affairs, which offers counseling and advisement services to minority students, also functions to facilitate retention. Other offices, programs, and services could also be mentioned.

In addition to the strategies mentioned in Table 1, some MCG Schools enjoy certain characteristics or qualities that likely facilitate retention. For example, students entering the School of Allied Health Sciences enter directly into one of the nearly 30 different programs administered through one of nine departments. Though the total School enrollment is approximately 450, enrollment in any given program is much smaller. Thus, new students go directly into a "home" department and enroll in relatively small classes in which student-student and student-faculty interaction are greatly facilitated.

Another attractive quality for students in both allied health sciences and nursing is that their programs are located within an academic health center. With its tremendous array of clinical activities and patient clientele, the MCG campus affords a breadth of opportunities matched by few other health professions education programs in the State.

Some Recurrent Themes

As I discussed retention matters with these School representatives, several recurrent themes came up in the conversations. These included:

1. Retention is important. Applicant pools for several of the health professions are shrinking; it's more important than ever before to retain those we admit.

2. Retention is everyone's responsibility—right down to the individual faculty member and the service staff.

3. There are more retention-oriented strategies and programs in place this year than last, and there were more last year than the year before. If we can think of something else to do that might work, we'll try that too.

4. The Minority Advising Program works, and it's a source of pride. It may even be helping us recruit more minority students.

Issues and Concerns

There were some issues and concerns voiced, too. These included:

1. What will happen to our applicant pools if financial aid patterns trend more and more to loans and away from scholarships and "forgiveness" programs? Can we adapt our programs to admit more part-time or nontraditional students? Can we accommodate increased numbers of students who MUST continue to be employed? And, what will happen to the demographic makeup of the various health professions if we—and other health professions educational programs—DON'T accommodate such students? Will some of

TABLE 1

RETENTION STRATEGIES REPORTED AS EFFECTIVE
BY SCHOOL REPRESENTATIVES

STRATEGY:	AHS	DENT	MED	NSG
Day-long interview system (as part of admissions process)		X	X	
Decelerated curriculum*	X	X	X	X
Early experiences in direct patient care		X		
"Early warning" system for academic problems	X	X		X
Minority advising program	X	X	X	X
Orientation program for new students	X	X	X	X
Prematriculation academic program for high-risk entering students	X	X	X	X
Sophomore advising/"buddy" program		X	X	
Support group for spouses of students			X	
Tutoring and/or remediation programs	X	X	X	X
Using as advisors only those faculty who volunteer	X		X	

*Typically reserved for students having academic difficulty or problems of health.

the certificate, associate degree, and even baccalaureate degree professions go begging? Will medicine and denistry be open only to the wealthy? On the other hand, is it even feasible to consider extending the curriculum for a program such as medicine, which already requires so many years to complete?

2. In some programs, applicant pools are already shrinking to the extent that some of those applicants being admitted on the "first round" today would have—in prior years—been placed on an "alternative" or "wait" list. In short, a larger proportion of some entering classes are closer to being minimally rather than maximally prepared. As a consequence, such programs are feeling the need for faculty to increase the amount of time and effort devoted to academic advising and to "preventive tutoring." But faculty wonder how they can do this and also respond to increasing pressures to publish, obtain extramural grants, and maintain clinical skills.

3. Structured programs of career counseling and placement assistance are not available at our institution, though most of the Schools discuss various career options within the curriculum. Should a formal program of services be established? Could such a program assist students who question their career choice to consider OTHER health professions options? Would such services be of significant help to students who need to "stop out"?

Concerns about retention can bring together campus units and service groups that, all too often, are more separate than united. They can also make us more sensitive to students' and applicants' needs and views. But it is when these concerns lead us to improve our programs and services that we can really consider retention rates in proper perspective—as important outcome indicators that are primarily by-products of those programs and services.

REFERENCES

Astin, A. W. *Preventing Students From Dropping Out*. San Francisco: Jossey-Bass, 1975.

Astin, A. W. *The American Freshman: National Norms For Fall 1980*. Washington D. C.: American Council on Education and University of California at Los Angeles, 1980.

Beal, P. E., & Noel L. *What Works in Student Retention*. Iowa City, Iowa: American College Testing Program and National Center for Higher Education Management Systems, 1980.

Ewell, P. T. *Conducting Student Retention Studies*. Boulder, Colorado: National Center for Higher Education Management Systems and The College Board, 1984.

Lenning, O. T., Beal, P. E., & Sauer, K. *Retention and Attrition: Evidence for Action and Research*. Boulder, Colorado: National Center for Higher Education Management Systems, 1980.

Noel, L., Levitz, R., Saluri D., & Associates. *Increasing Student Retention*. San Francisco: Jossey-Bass, 1985.

CONCEPTUAL ASPECTS AND PRACTICAL APPROACHES TO STUDENT RETENTION IN HEALTH PROFESSIONS

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The School of Health Professions at Armstrong State College offers 12 degrees in health professions. As the major suppliers of health professionals in southeast Georgia, we are sensitive to the demands of the consumer for a knowledgeable practitioner who knows the how and what of their respective disciplines. All programs at Armstrong which can be accredited by outside agencies are accredited. All programs produce graduates most of whom are successful on their first attempt at credentialing exams. These glowing accomplishments are the results of many hours of hard work by students and faculty who are career-oriented. It is important to know what the outcome of the educational process is in health professions at Armstrong State College for it is only then one can appreciate the beginning students. Many of our students begin their collegiate careers with the admission classification of provisional.

The typical student in health professions at ASC is nontraditional. Most are 28, have children, work 20 or more hours per week, live off campus but within 50 miles of Savannah, and have completed at least 20 hours of core prior to admission to a designated health program. More than 80 percent receive some form of financial aid and more than 30 percent participated in developmental studies programs.

Acknowledging the usefulness of information presented heretofore from the research literature, I will limit my remarks in that area specifically addressing unique needs of the students in health professions. Munro (1980) from nursing, Young and Fellow (1981) from dental hygiene, and Douce and Coates (1984) from respiratory therapy observe that a frequent cause of attrition in these fields is change in career interest related to inadequate knowledge of the field. Karen Pinter (1983) in a meta-analysis has identified characteristics of health professions students that hinder success as being: (1) inadequate basic skills, (2) little background in science and math, and (3) inability to deal with affective problems such as fear and anxiety. Kobland's study substantiates these findings in that this research suggests that nursing students are primarily motivated by a desire to help people—a motive which unfortunately does not always coincide with an interest or ability in science.

The problem then is magnified, according to Birnie (1978), when the student's developmental level is also delayed. Knowledge of the scientific process includes the ability to ask many questions, challenge the validity of unsupported statements, consider all available information when forming conclusions, report observations, evaluate ideas, and look for inconsistencies. These behaviors according to Piaget would call for the formal operational stage of cognitive development.

However, research during the last decade indicates that delayed cognitive development is a characteristic of failing students, especially in science-related fields. Martin reports that only one-third of the college population has reached the formal operations level and many older females and underachievers from minority groups will not be functioning at the formal level in science courses. Science courses form the basic framework upon which all health professions curricula are built.

Therefore, the typical health professions students, because of these nontraditional qualities, enter health programs designed to make failure inevitable. They may not

have mastered many basic skills in studying math and science. They may not be functioning at the cognitive level demanded by the postsecondary level. Lastly, the role socialization of older southern women does not yield a student who can effectively deal with the affective problems of fear and anxiety which interfere with learning and growth.

Karen Pinter (1983) offers five characteristics of programs in health professions that are responsive to the needs of the health professions students. They are: (a) recognition of the need to offer study/learning skills course with content area classes, (b) recognize the need for development of cognitive skills—utilizing instruction strategies that involve active learning in problem-solving skills, (c) utilize peer tutoring and small group studying, (d) recognize the affective needs of the student, and (e) establish close working relationships with schools or departments from which support comes.

There are many concepts that can be used in operationalizing this data. Two primary concepts undergirding our conceptual framework are adult learning concepts and faculty investment.

Malcom Knowles' (1973) assumptions about andragogy or adult education are of prime importance when interacting with students in health professions. Students with life experiences are self-directed, self-defined, recognize the value of readiness to learn because of a need to know, and are problem- not subject-oriented. Students in the health professions are adult learners which places a shared responsibility on faculty and students for interaction. Beckes (1980) pointed out that all successful retention programs initiated for high risk students have one key characteristic—faculty approval and involvement.

In summary then, the health professions student is unique in terms of developmental needs and educational support to prevent attrition. Useful concepts must not lie dormant. Retention must be sold. Marketing of the student's abilities coupled with early and ongoing prescriptive remediation produces success. Faculty support and involvement are crucial.

Three years ago the School of Health Professions formalized a school-wide committee to address the problem of retention. Attrition in our school was approximately 40 percent—about average nationally—but with pleas from institutions who hire health professionals requesting more graduates and the budget becoming less, we had to do something. Like all productive faculty we formed a committee. The committee devised a computerized survey form to be mailed to all students who failed to meet progression requirements. Variables elicited from the literature are being analyzed to determine if there is a correlation between the attrition causes verbalized to department heads and that reported anonymously. Hopefully, we will also be able to provide a prevention program.

Our observed experiences and preliminary data have led us to believe that practical approaches to prevent attrition exist. I'd like to share some of our strategies with you—many are prescriptive in nature—i.e. assist students already identified as high risk with the support system and resources to prevent attrition. As a practical approach we have divided the practical approaches into four categories: fiscal support, academic support, adult counseling and feedback, and personal support.

Listed below are some strategies useful in each area.

1. Fiscal support: scholarships solicited by faculty from agencies, emergency funds from which students can draw.

2. Academic support: faculty advisors, instructional procedures that utilize group problem-solving strategies, no class attendance policy but clinical attendance policy, health professions faculty and arts and sciences faculty must communicate.

3. Adult counseling and feedback: faculty as role models, graduate follow-up surveys, weekly logs for faculty feedback, prescriptive remediation.

4. Personal support: peer counseling, cookouts, tips on surviving as a student and a parent.

REFERENCES

Baj, Pamela. Can the Generic Curriculum Function for the Returning RN Student? *Journal of Nursing Education*, 1985, *24* (2), 69-71.

Beckes, I. Attracting and Retaining More Nursing Students. *Nursing & Health Care*, 1980, 242-244.

Birnie, H. H. Identifying Affective Goals in Science Education. *Science Teacher*, 1978, *45*, 29-33.

Douce, F.H. and Coates, M.A. Attrition in Respiratory Therapy Education: Causes and Relationships to Admission Criteria. *Respiratory Care*, 1984, *29* (8), 823-828.

Hilbert, G.A. and Allen, L.R. The Effect of Social Support on Education Outcomes. *Journal of Nursing Education*, 1985, *24* (2), 48-51.

Hudepohl, N.C. and Rud, S.B. High Risk Nursing Students, Part 2, Establishing A Student Retention Program. *Nurse Educator*, Autumn 1984, 19-24.

Knowles, M. *The Adult Learner: A Neglected Species*. Houston: Gulf Publishing Co., 1973.

Kobland, J. Research Project: Practical Nursing Licensing Exam Achievement Relationship to Work Performance and Retention. Final Report ERIC Document, NO. ED 074 210.

McDonald, J.M., Collins, R.F. and Walker R. Success: A Program to Reduce Student Nurse Attrition. *Nurse Educator*, Winter 1983, 17-20.

Munro, B. Dropouts from Nursing Education: Path Analysis of A National Sample. *Nursing Research*, 1980, *29*, 371-373.

Pascarella, E.R., Terenzini, P.T. and Wolfle, L.M. Orientation to College and Freshman Year Persistance/Withdrawal Decisions. *Journal of Higher Education*, 1986, *57* (2), 155-174.

Pinter, K. Support Systems for Health Professions Students. *Journal of Nursing Education*, 1983, *22* (6), 232-236.

Reed, S.B. and Hudepohl, N.C. High Risk Nursing Students: Emergence of Remedial/Developmental Programs. *Nurse Educator*, Winter 1983, 21-25.

Reed, S.B. and Hudepohl, N.C. High Risk Students Part 3, Evaluating A Student Retention Program. *Nurse Educator*, 1985, *10* (5), 32-37.

Young, L. and Fellows, A. Dental Hygiene Student Attrition. *Journal of Dental Education*, 1981, *45*, 357-359.

A RETENTION MODEL FOR MINORITY STUDENTS IN ALLIED HEALTH PROFESSIONS

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Despite the efforts of many governmental and private agencies, racial minorities continue to be underrepresented as health practitioners in the fields of medical technology, nutrition/dietetics, physical therapy, and respiratory therapy. It is estimated that minorities represent less than 7 percent of health practitioners in these fields at the national level and less than 5 percent in the state of Georgia.

Career development literature cites several contributing factors to minority underrepresentation in the health science fields. Minority/disadvantaged students tend to make career choices later, have diminished access to career information, have limited experiences which prepare them for competition, and generally progress through careers without significant role models.

The 20 percent attrition rate, which exists for minorities enrolled in these four health science fields at Georgia State University, is cause for alarm. The reasons for this attrition are not clear at this time. Heavy course loads combined with part-time employment and lack of preparation for the rigorous academic demands are thought to be the primary contributors to the problem.

Lack of adequate financial resources has been documented as one of the most powerful barriers to minority student success for decades. The problem appears to be intensifying as federal and state funds for education are deleted. More than 70 percent of the students currently using the tutorial services provided by our program to increase retention are employed in part-time jobs. Three of these students work 30 hours per week while enrolled in 20 quarter hours of coursework.

The College of Health Sciences at Georgia State University administers a federally-funded project, under the direction of Dr. Lynda D. Woodruff, which addresses the problem of minority underrepresentation in the departments of medical technology, nutrition/dietetics, physical therapy, and respiratory therapy. The objectives of the project are as follows: (a) to increase minority/disadvantaged student applications and enrollment, (b) to reduce minority/disadvantaged student attrition, and (c) to follow-through on goal achievement after graduation.

To meet those objectives, a five-stage program was designed and implemented in the physical therapy department of the College of Health Sciences in 1977. The program was expanded in 1984 to include three additional departments. The five stages of the program are (a) identification, (b) recruitment, (c) enrichment, (d) retention, and (e) goal achievement. Enrichment is a structured six-week program (Summer Enrichment Experience). All other stages are unstructured and ongoing throughout the academic year.

Identification and Recruitment—Linkages with feeder institutions are strengthened by the use of liaison faculty members at each campus to target and track prospective applicants. A formal group of minority alumni serve as the primary recruitment arm. Referrals come from preprofessional programs throughout the Southeast. A computer system is used in the tracking of prospective students.

Attention is also given to the admissions process. Experimental learning opportunities in the clinical setting are provided prior to admissions because such experiences often enhance academic performance.

Students are assisted in gaining admissions to preprofessional programs designed to enhance basic skills before entering the GSU program. Admissions personnel are assisted in developing alternative techniques for evaluating minority and disadvantaged students (i.e., utilization of data from the Summer Enrichment Program in final admissions reviews).

Enrichment—The Summer Enrichment Program (SEP) provides an intense enrichment experience for prospective health science students.

Retention—A network of support services are provided. Counseling services include advisement and support group sessions at least four times each quarter. During these sessions students deal with topics such as survival skills and resolution of problems contributing to attrition. Tutorial services are available upon request. A formal "buddy system" is employed to assign each new minority student to a senior minority student during the new student's initial enrollment period.

To assist students in identifying sources of financial aid, information is collected about scholarships, grants, loans, and service cancelable agreements specific to the four health professions. Students are informed of CASHE, a national computerized financial aid service. A counselor in financial aid has been identified to specialize in funds available for health profession majors.

Faculty development seminars and informal exchanges aid increased faculty awareness of the special needs of minority/disadvantaged students and assist faculty members in developing and using appropriate instructional strategies. Programs are modified. For example, an extended curriculum has been developed for students who demonstrate potential in SEP but who have weak admission profiles.

Activities are provided to promote family support and involvement during all stages of the student's course of study. Families are introduced to health program demands, career expectations, and career opportunities. Instructional materials have been specifically designed for families of minority/disadvantaged students. University faculty or staff serve as contact persons for specific families and address questions of family members.

Goal Achievement—Goal achievement supports the student through graduation and through the period of preparing for licensure and certification examinations. This stage ends when the graduate enters the health manpower pool as a credentialed practitioner. At this point the new minority professional is recruited to assist the next group through the academic program.

During the three years since the project's expansion, minority student enrollment has increased from 20 to 33. This represents an increase from 12.35 percent to 19.07 percent of the total number of students enrolled in these programs.

INSTITUTIONAL STUDIES ON RETENTION: A TAXONOMY

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A quick review of the retention research literature reaffirmed a notion that it would be impossible to summarize all of the institutional studies that have been reported or conducted to examine the issues related to student retention. The research review did suggest, however, that there might be some utility in providing a context or framework for understanding, evaluating, and conducting institutional studies on student retention. The result is this very simple taxonomy of institutional studies on retention which may help you sort through what you have heard today, or have read about retention studies, or have found to be true from doing your own research. Although the Jones taxonomy may not withstand careful scrutiny, the intent is not to focus so much on the classification scheme as it is to examine or provoke questions about student retention research: the taxonomy is viewed as the messenger, not the message. The editorial comments and any implicit judgements on retention research in this presentation, as well as the taxonomy, are matters of opinion and you are invited and encouraged to take any exceptions with them you wish.

The Jones Taxonomy Of Institutional Studies On Retention

The Jones taxonomy of institutional studies on retention is a five-level classification, and proceeds in hierarchical fashion from the simple to the complex. Because complexity is multidimensional and a matter of relativity, it must be noted that some of the most complicated retention studies have been done at the first level of the taxonomy, and some of the simplest studies have been done at the highest level of the classification. It is also important to recognize at the outset that complexity alone does not make a good retention study. In fact, the more complicated the study becomes the more suspicious one might be of its significance for institutional implementation. Another important thing to note about retention studies is that statistical technique, no matter how sophisticated, will not alone make a retention study complex or good. Complexity is more likely to be a function of how many variables are being examined, how many and what questions are being pursued, and how many combinations of variables and questions are incorporated in the study. Good retention studies, regardless of their location in the taxonomy, are a function of whether or not they answer the questions being studied and whether or not the findings can be put to use. Assuming that the study is done well, then the Jones rule for institutional retention studies that applies at all levels of the taxonomy is the simpler the better.

The classification of retention studies in this taxonomy is arbitrary, but the research identified is representative of the retention research that has been done and should be done by all institutions. The taxonomy is based on five sets of retention questions—how many, how come, why not, how good, and what if—retention research should consider. If the taxonomy isn't exactly hierarchical in terms of complexity, it is at least chronological in order of a first to last progression of institutional research. For certain, all retention studies begin with questions of how many.

How Many

At the first level of the taxonomy are those retention studies aimed at the basic question of how many. It is clear that questions of how many are primary to all retention studies and for that reason they may not only be the first but also the most important institutional retention studies conducted. In root form, studies of how many are used to determine how many students enroll, how

many graduate, how many continue, and how many withdraw. Variations include how many students of a given race, or sex, or degree program, or other personal characteristics persist or not. The combinations of subgroups is virtually unlimited.

Because it is intuitively obvious that retention begins with student recruitment and admission, the place to begin institutional retention studies is with how many questions of applicants. In this instance, the root questions are how many apply, how many complete applications, how many fail to complete applications, how many are accepted, and how many enroll. Variations include questions of race, sex, degree program, etc., as well as questions about the source of the applicants (e.g. how many applicants from a specific high school, geographic area, or socioeconomic background). Again, an unlimited number of subgroups can be identified, and it is possible to add a few meaningful root questions depending on the number of different applicant categories an institution recognizes.

Figures 1 and 2 are illustrative of the matrices that could be built doing how many level retention studies. As with all matrix type output, considerable complexity can be achieved by adding additional variables in various combinations. The illustrations are not intended to be all inclusive, of course, but simply an attempt to represent the type of questions that could be included in retention studies at this level.

Quite simply, the object of how many studies is to determine literally how many students persist.

How Come

The second level of retention studies in this taxonomy asks questions of how come. How come studies are really how many studies, but with a different orientation. In the how many studies, the focus of attention is on what is numerical retention fact. In the how come studies, the focus is on the reasons why the retention facts found in the how many studies are true. How come studies typically seek to determine how many students left for what reasons, but studies of this type should also look for the reasons students actually enroll and do persist.

In how come studies, the root questions focus on the reasons students persist or do not. Some have suggested that there are as many reasons for students persisting or not persisting as there are students. But for purposes of discussion, all of those reasons can be placed in one or more of three major groups of factors influencing student retention: those dealing with individual or personal matters (personal), those under the control of the institution (institutional), and those generally outside the domain of the student or institution (environmental) (Figure 3).

Perhaps all how come questions dealing with student attrition—or retention—are ultimately personal, but among the more commonly mentioned that are specifically related to student characteristics or personal concerns are: student ability and academic preparation; family reasons, health reasons, financial reasons, student goals, uncertainty about major or career, lack of motivation, social reasons, and displeasure with the institutional environment. Institutional characteristics frequently cited as factors in persistence include: institutional type, size, and location; institutional purpose, programs, policies and procedures; and institutional personnel. Environmental influences on student retention include the economy, the job market, peer pressure, career preparation or requirements, and military opportunities or obligations. How come studies are usually directed at determining how important these and other factors are in student retention for various groups of students, as well as, identifying any institutional specific factors which might influence retention.

Retention studies examining the personal factors influencing student retention seem to appear most often in the literature. Some of the findings have suggested areas for direct institutional intervention, but in other areas the institution can only provide a

Figure 1

A Simple Matrix of Data From A How Many Level Study
(Admissions Questions)

	Number of Applicants (Freshmen, Transfers, and Other Subgroups)				
Variables	Applied	Completed Application	Application Incomplete	Accepted	Enrolled
Sex					
Race					
Degree					
Program					
High School					
Transfer					
College					
Geographic					
Location					
Socioeconomic					
Background					

Figure 2

A Simple Matrix of Data From A How Many Level Study
(Matriculated Students)

	Number of Students (By Class or Other Subgroups)			
Variables	Matriculated	Graduated	Still Enrolled	Not Enrolled
Sex				
Race				
Degree				
Program				
Age				
Full-time				
Part-time				
Commuter				
Socioeconomic				
Background				

supportive role for the student in dealing with the retention issues. Studies of institutional factors suggest that institutional size, location, and type may influence retention, but few institutions would or could change those institutional characteristics. More research should be aimed at institutional purpose, programs, policies, procedures, and the influence of institutional personnel factors which can be more directly controlled by the institution. Environmental influences on retention are important to understand, but primarily for the purpose of appropriate reaction rather than significant proaction.

Figure 3
Factors Influencing Student Persistence

Personal
- Student Ability
- Academic Preparation
- Family
- Health
- Financial
- Student Goals
- Career or Major Uncertainty
- Motivation
- Social
- Displeasure with Campus Environment

Institutional
- Type of Institution
- Institutional Size
- Location of Institution
- Purpose
- Programs
- Policies
- Procedures
- Personnel

Environmental
- Economy
- Job Market
- Peer Pressure
- Career Preparation, Requirements
- Military Opportunities, Obligations

Like how many studies, how come studies should examine admissions issues as well as enrollment issues. While admission studies are typically aimed at competitive market analysis, attracting and keeping applicants may be more of a retention problem based on negative feedback from currently enrolled students than a matter of discovering ways to expand the institutional student applicant pool.

There often is a question about the validity and reliability of how come studies. Primarily because there is reason to believe that students will give "socially acceptable" reasons for withdrawing (e.g. financial reasons, family matters, uncertainty about the future), or even for attending (good faculty, good programs) college in the first place. A second concern with how come studies is that they often overlook the fact that the same personal, institutional, and environmental factors that are identified as adversely affecting retention, may also be positive influences in student retention: institutional size may drive one student away, but attract another. Although they may be just a subset of how come retention studies, there appears to be merit in a set of institutional retention studies that examine the reasons more students don't drop out. Level 3 institutional retention studies ask why not?

Why Not

If one accepts the premise that all students face basically the same experiences but react differently to them, then it is as important to know as much about the reaction, positive or negative, to an experience as it is to understand the experience itself. As it is true at most institutions the number of persisters is greater than the number of students who withdraw, why not studies should explore the reasons most students faced with similar personal, institutional, and environmental pressures that caused other students to withdraw, did in fact persist. Knowing how persisting students cope with their problems

could suggest programs for helping the dropouts cope with their problems. On the other hand, the personal qualities of students who say "I don't have to put up with this any longer," and leave might be more in keeping with what colleges and universities are trying to develop than the behavior of students who simply accept the programs, policies, teaching, and requirements demanded of them regardless of how trivial or how good. Institutions may, in fact, better serve students and society if more students were encouraged to stop out or drop out. Higher education may not be the best use of a student's time at a given period in time. Why retain students who would be better served somewhere else, doing something else. There may be an institutional obligation to help the student find a better alternative for his/her time and money. Why not explore other alternatives for the student? If the institution—or higher education—is not meeting the needs of the student, why should the student persist? Why not stop out? That 50-60 percent of undergraduates will eventually earn their undergraduate degrees doesn't really prove that they are getting what they want, need, or must have, nor does it prove that they are having a positive experience in the process. The larger issue may not be how many students are retained or graduated, but how much good was done for them in the process.

How Good

Ultimately, of course, there needs to be research—retention research if you will—on how well institutional and individual goals are being met. That leads to the next level of the Jones taxonomy of institutional studies on retention, the how good studies. Two types of how good studies are identified in this taxonomy, evaluation studies and quality of life studies.

In a very real sense, all retention studies are evaluation studies, because all retention studies provide data that is used to evaluate institutional success in re-enrolling matriculated students and/or in keeping those students until they graduate. Evaluation research in this taxonomy, however, identifies the studies that are specifically designed to determine how successful institutional programs or policies designed to improve retention have been. With the exception of some policies or programs which alter academic probation, dismissal or return from academic suspension where the numbers of students can be more precisely determined, measuring the success of programs designed to reduce attrition can be very frustrating. Assuming that retention programs are the result of how come or why not studies, the retention program objectives should be relatively clear at the time the program is initiated, and when the program objectives are set, measurable outcomes should also be identified. Unfortunately, that is more easily said than done, particularly because the outcomes of such programs—namely the numbers of students retained as a result of the specific intervention—aren't that easy to count. In fact, it may not be the specifics of the program that convinces the student to stay as much as it is the visible evidence that someone at the institution cares about the student. It isn't just enough to "retain" the student, however, and the institution must also be concerned about the quality of the student experience the persistor will enjoy. In almost every instance improvement in the intangible "quality of student life" for those who persist may be the more significant measure of success than the more tangible measure of the number of students who can be identified as "saved."

At least as important as studies of program success are retention studies aimed at measuring the quality of life on campus. Just how good is the experience (life) of the persistor? Is anything gained if students are persisting in unimaginative, uninspiring, low quality educational experiences? Current student outcomes research will provide some additional useful information on the quality of the student educational experiences, but outcomes research alone will probably not speak directly to the experience or process issues in the quality of student or institutional life crucial to student retention. What is needed is research that will evaluate the

educational experience and process itself—the quality of life of the student. In a sense, it may not be whether you win or lose (outcomes research), but how you play the game (quality of life research) that counts.

What If

The last category in the Jones taxonomy of institutional studies on retention may only exist in late hour discussions in dark, nonacademic settings and, consequently, are not well documented. It would seem that wider exposure of such ideas could only lead to more creative retention programs and services. The retention research in this category takes its title from the Hewlett-Packard advertisement, and asks "What If"?

What if retention research may more appropriately fit in the taxonomy before evaluation research, because it deals with the creative program solutions which are required to respond to the findings of how come and why not studies. But, if one considers such studies as "reflective," then perhaps they can only be developed after the findings of the other retention studies have been examined. In any event, there isn't too much in the research which tackles head on some of the things we know about why students drop out, and really explores the consequences of applying what we know about retention. For example, considerable retention research has shown that some students are likely to be more successful than others. What if we only admitted those students who institutional retention studies indicated were going to be successful? What if we gave a rebate or bonus to program completers? It is said that it costs more to recruit a student than it does to retain him/her. What if we shared that cost saving with the persisting student? What if we required all students to live on campus? The retention research suggests that students who live on campus are more likely to persist than others, yet how many institutions have dropped underclass housing requirements to retain students? What if every faculty member had fifteen students to call or see every week on a personal basis, not just as advisors but in more of a family relationship? We know that students who are involved in on-campus work have a higher retention work rate than students who are not. What if all institutions include on-campus work programs as part of their requirements?

Required attitude adjustment. Every conference has an attitude adjustment hour, but what if all campus personnel were required to attend a seminar or workshop where they examined their attitudes in terms of their job and how they interact with students? It might be that we need lower retention for some of our clerical people to increase our retention of students. What if graduation were guaranteed? Isn't the Medical College's assumption that "If we admit you, we expect you to graduate," better than the old admonition given entering students, "Look around you, at the end of the first quarter the student on your left is going to be gone." "Fifty percent of you will not be here at graduation." What if instead, students were told, "We are going to do our best to graduate you." "We may have to work pretty hard at it and we expect you to work pretty hard at it, but we admitted you and that means we expect to graduate you." Or as a final example, what if we had no retention programs at all? How much has retention research done for the retention rate over the last 25 years?

Unfortunately, brain storming or "what if" and "how about" questions don't often enough find their way into active research. It is included in this taxonomy because it is considered critical to improving retention and improving the quality of the educational experience.

There it is, the Jones taxonomy of institutional studies on retention. It was an attempt to quickly and briefly review retention research by identifying the several types of retention studies that can and have been done. It was, as Haskin Pounds wanted, an attempt to provoke you with some thoughts about institutional studies on retention: not to make you mad, but to stimulate your thinking about retention research at your institution.

SACS' EFFECTIVENESS CRITERION: A SELF-ANALYSIS BASED UPON THE "MUST" STATEMENTS

Glynton Smith and James E. Prather
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Background, Issues and Purpose

The quality issue in higher education has been addressed by national panels, task forces, and accreditation agencies. These groups have focused frequently on student assessment and institutional effectiveness. Fincher (1983) reviewed several of these reports issued by national commissions and task forces. A common theme stressed was a desire for the improvement of academic competencies, although little guidance was offered to institutions in terms of which competencies need to be improved and which methodologies should be employed to measure these improvements. Fincher (p. 29) summarized this contradiction as follows:

> Thus, little guidance is given in a form that would facilitate the development of academic competencies, their assessment or measurement, and the establishment of their curricular or instructional validity. Virtually no mention is given to how students may acquire these competencies, whether or not public school teachers can or will teach such competencies, and the methods by which schools can develop such competencies effectively. In brief, national commissions and task forces have identified a national crisis in education, but wisely or unwittingly or cynically they have left the problems of definition, measurement, and instruction to the nation's schools and colleges.

A recent national survey, conducted by the American Council on Education, shows that universities are plagued by the same contradiction (El-Khawas, 1986). For instance, many university administrators favor assessment, but express uncertainty of how to solve the problem of definitions and measurements of student competencies. There is a wide gap between what is judged by numerous university administrators to be appropriate methods of assessment and what is actually being used. There tends to be consistency in perceptions on appropriate assessment measures which is inconsistent with the major potential obstacle to implementation which is uncertainty on what to evaluate. The complexity of the quality issue at universities is underscored by a careful consideration of these survey results (p. 14-17) and the work of Tan (1986).

The emphasis on student assessment and institutional effectiveness is readily apparent in the new *Criteria* adopted by the Southern Association of Colleges and Schools (SACS). The Commission on Colleges of SACS developed *Criteria* (December, 1984) to replace its old *Standards*. In several years of committee work and discussions with the College Delegates Assembly, a major issue unfolded on one criterion: institutional effectiveness. Many presidents, who generally represent institutions as the voting delegates, recognized the task and expense of attempting to define and measure outcomes validly and reliably across academic departments, colleges or institutions. They feared misuse by external forces and were unwilling to commit their own institutions to the proposed criterion. A compromise was reached which entailed the elimination of all twelve references to "outcomes" (Rugg, 1984). What remained under Section III, Institutional Effectiveness is entitled 3.1 Planning and Evaluation and 3.2 Institutional Research. The preface to those subsections reads as follows:

> The quality of education provided by member institutions is the primary consideration in the decision to confer or reaffirm accreditation. The evaluation

> of educational quality is a difficult task requiring careful analysis and professional judgment. Traditionally, accreditation has focused attention almost exclusively upon institutional resources and processes. It has usually been assumed that, if an institution has certain resources, effective education will occur. A comprehensive approach to accreditation, however, takes into account not only the resources and processes of education (such as faculty and student qualification, physical plant, fiscal resources and other elements addressed in the *Criteria*) but also the evaluation of the results of education and plans for the improvement of the institution's programs.
>
> The level of institutional quality depends not only on an institution's educational processes and resources but also on the institution's successful use of those processes and resources to achieve established goals. Institutions have an obligation to all constituents to evaluate effectiveness and to use the results in a broad-based, continuous planning and evaluation process (p. 9).

The purpose of this paper is to describe how one state university is approaching the new SACS' expectation on "institutional effectiveness." The paper presents (a) an effectiveness process model developed by one self-study committee; (b) a matrix of effectiveness-related "must" statements underlying the criteria; and (c) a description of the involvement of an office of institutional research. The material presented is currently being tested by an on-going self-study activity which includes 150 internal committee members and all organizational units.

An Effectiveness Process Model

Historically, academic enterpreneurial spirit is one of the principal reasons for the rapid growth and development of some institutions. Under this concept, each academic or other budgetary unit has been responsible implicitly for the development of its own effectiveness process that is consistent with its own statement of purpose/mission. Perhaps this accounts for the estimation that less than 5 percent of the colleges and universities in the South utilize an institutional planning process which could be described as having a significant impact on institutional decision making (Nichols and Clark, 1983).

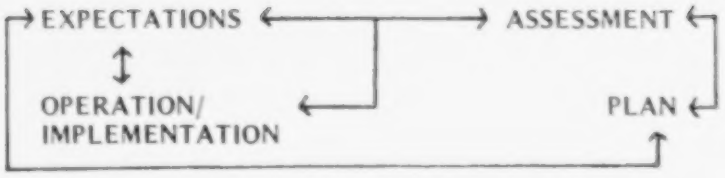
From the SACS' viewpoint, there should be relative consistency/coherence in the process throughout an institution which could hardly occur without systematic institutional planning tied to decision making. The criterion states that an effective institution must establish adequate procedures for planning and evaluation. It must define expected results (goals) and describe how the achievement of these results (goals) will be ascertained. The criterion emphasizes procedure, and process, but does not define the nature of the procedure or process. It does not define the nature of the institutional purpose/mission, the institutional plans, institutional expectations/goals and evaluative procedures, all of which may vary by institution. A written unified institutional plan is not required by the criterion, neither is a planning officer, nor an office of institutional research/planning. Institutions have an opportunity to use their own creativity in responding to the accrediting group. The flexibility provided is advantageous to institutions particularly in an era of financial constraints.

What then does SACS require of its 700-member postsecondary education institutions? An attempt to answer that question at one institution produced the effectiveness process model shown in Figure 1. The model shows the relationships among the elements involved under the SACS' criterion in the institutional effectiveness process. A similar process is involved for the various subparts of the organization.

The effectiveness questions raised by the *Criteria* seem quite repetitive. The same

Figure 1

EFFECTIVENESS PROCESS



idea is expressed and the same material is asked for under other sections of the document. In every case, it seems, the first question seeks some statement of the institutional expectations for that area. The second question seems, almost invariably, to be about assessment. How, given these expectations or goals, does the institution assess the extent to which expectations are being met? The third question, then, asks how this assessment information is used to modify the institution's planning for that aspect of its operation. And last, although it is not asked explicitly every time, the implication is that the institution should be able to provide some evidence that these plans are, in fact, being implemented.

"Must" Statements

Underlying Section III, Institutional Effectiveness, are the "must" statements. If an institution is to be reaccredited, the SACS' visitation team must answer affirmatively the group of effectiveness-related statements, not limited to Section III, provided in Figure 2. The visitation team evaluates each statement from the viewpoint of the whole institution. Since any college or university is the sum of its component parts, principal administrators have been asked to consider these effective statements. The matrix provides an internal score card for a self-analysis of the entire university. The matrix stimulates communication and cooperation which, in turn, lead to a self-correcting process.

A steering committee of the self-study reviewed the *Criteria* and *Manual* prepared by the Commission on Colleges and found that information must be obtained from all units of the university. A worksheet, designed and written by SACS (1985) for use of the visiting committee, was modified to obtain the answers needed on effectiveness for nine self-study committees in writing their reports. The worksheet is being used as an educational, as well as an information gathering process. See Table 1. Respondents were asked to document a "yes" answer on the worksheet. In areas where "no" was indicated the respondents were asked "to consider what actions need to be taken within your area and include these as recommendations." Obviously, any deficiencies found will be corrected if possible prior to the SACS visitation with faculty and administrators working in tandem.

Institutional Research Involvement

Most SACS self-studies provide opportunity, challenge, and visibility for an office of institutional research. The reports issued illustrate institutional study efforts under Criterion 3.2.

As one institution enters into its self-study for a visitation in 18 months, the involvement of an office of institutional research, thus far, has entailed:

1. The Director serves as the resource member of the Effectiveness Committee.

Table 1

Institutional Effectiveness-Related "Must" Statement Matrix

	Each question answered by each administrator with following code: 1 = yes, 2 = no, 3 = not applicable	
	Questions	Principal Administrators
I.	Master plan for phys. & ed. growth	Vice President Academic Affairs
II.	Planning & eval. processes demonstrate purpose and role being fulfilled	Vice President Fin. Affairs Vice President Inst. Advanc.
III.	Procedures for planning and evaluation	Vice President Planning
	Defines expected educational results	Vice President Research
	Description of how achievement of results will be ascertained	Director of Admissions Dean of Students
	If maintains research or public service missions, it develops and implements appropriate procedures for evaluation effectiveness	Director of Cont. Ed. Librarian Registrar
	Shows evidence of research designed to support its planning and evaluation functions	Academic Deans
	Uses research function for continuing study, analysis, appraisal of programs, policies, procedures and programs	
	Regularly evaluates research function	
IV.	Regularly evaluates admissions policies	
	Defines process by which curriculum established	
	Process established to improve instruction	
	Goals of each course understood by faculty and students	
	Evaluations of students re: quality levels of performance	
	Periodically studies effectiveness of instr.	
	Grad. instruction evaluated and results used	
	Continuing education goals established	
	Evaluation of off-campus classes	
	Assignment of faculty responsibilities	
	Evaluation of individual faculty members	
	Guidelines for evaluating faculty	
	Measure performance against criteria	
	Orientation, etc. of part-time faculty	
	Orientation, etc. of GTAs	
V.	Evaluation of library programs	
	Evaluation of cooperative library arrangements	
	Evaluation of student development services	
VI.	Resources used to achieve goals	
	Evaluates effectiveness of administrators	
	Sound budget processes	
	Plan for upkeep of property	
	Annual plan for upkeep of property	
	Maintains and evaluates safety plan	
	Facilities master plan	

2. The Director and Assistant Director have been called on as consultants in survey designs.

3. A catalog of institutional research report titles over the past five years along with other informational sources has been formulated and grouped by the new *Criteria*. This catalog was distributed through the Self-Study Office to the Steering Committee members and Chairman of other Self-Study Committees.

4. Annual publications of the office have been called for and provided to the same distribution shown above. These included a five-year series of *Abstracts of Institutional Research* and the *Fact Book*.

5. Two staff papers have been written as background to members of the Effectiveness Committee: one on planning within the State system of higher education and the other on student assessment and institutional effectiveness.

6. An institutional environmental analysis has been completed and a student demographic study is underway.

Certainly, any institution which has made a commitment to the establishment of an on-going institutional research function is in a good position to answer in the affirmative the "must" statements under Criterion 3.2. SACS does not mandate an office, but it does do so for the function (Jones, 1986).

Implications

The quality issue in higher education has been recognized and acted upon by the College Delegate Assembly of SACS. H.R. Kells (1986) judges the establishment of the effectiveness criterion to be an extremely important action for higher education in the South. He believes that by this action "SACS will also have an effect on all of U.S. accrediting, and, through it all U.S. higher education institutions" (p. 4).

Some institutions in the South will embrace genuinely the planning and evaluation expectations promulgated by SACS and retain control of their own destinies. Others will give token attention by generating outdated planning concept documents of the 60's. Undoubtedly, increased expectations of systematic planning and evaluation by external forces will increase tension among and within colleges and universities, but this could result in positive change. Barbe and Sullivan (1982) summed up the planning dimensions in a collegiate environment:

> If faculty and chairmen focus their planning efforts on courses and curriculum, if academic deans and administrators plan the academic policies that will be successful in the complex environment of the 1980's and 1990's, if governors plan for insuring that the public trust of higher education is well-placed, then the dimensions of planning will be addressed. If the groups involved in planning interact with dignity and direction, then the enormous educational issues of this decade will become manageable. (p. 286)

REFERENCES

Barbe, R.H., & Sullivan, M.M. Removing the mystique surrounding academic planning. *Research in Higher Education*, 1982, *16*, 283-286.

El-Khawas, E. *Campus trends, 1986* (Higher Educatior Panel Report No. 73). Washington, D.C: American Council on Education, 1986.

Fincher, C. Today's problems and yesterday's solutions. *Proceedings of the 1983 Conference on Higher Education in Georgia*. Athens: University of Georgia, Institutional Research and Planning, 1983, 27-31.

Jones, L.G. The implications of new SACS criteria for institutional research. *Proceedings of the 1986 Conference on Higher Education in Georgia*. Athens: University of Georgia, Institute of Higher Education, 1986, 59-63.

Kells, H.R. Institutional effectiveness criterion called 'extremely important' for higher education. *Proceedings of the Southern Association of Colleges and Schools*, 1985, *38*, 4-7.

Nichols, J.O., & Clark, S.B. *The impact on planning throughout the South of the proposed changes in criteria for accreditation by the Commission on Colleges, Southern Association of Colleges and Schools (SACS)*. Paper presented at the 18th Annual International Conference of the Society for College and University Planning, July 1983, New Orleans, LA.

Rugg, E.A. *The criteria applied to a college in transition: Fallacious thinking about outcomes assessment*. Paper presented at the Conference of Academic Deans of the Southern States, December 1986, Atlanta, GA.

Southern Association of Colleges and Schools. *Criteria for accreditation: Commission on Colleges*. Atlanta: 1984a. & 1984b.

Southern Association of Colleges and Schools. Worksheet for the required statements of the *Criteria for accreditation: Commission on Colleges*, 1985. (Available from Commission on Colleges, Southern Association of Colleges and Schools, 795 Peachtree St. NE, Atlanta, GA 30365).

Tan, D.L. The assessment of quality in higher education: A critical review of the literature and research. *Research in Higher Education*, 1986, *24*, 223-265.

STUDENT RETENTION AS A MEASURE OF INSTITUTIONAL QUALITY

Harry Carter
Vice President for Academic Affairs
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Georgia Southern College

Based on experiences at Georgia Southern over the past four years, I believe that retention can be used as a goal for strengthening and/or implementing basic programs which are essential features of a quality educational experience for students.

It has been a tradition at Georgia Southern to have an opening faculty meeting for the fall quarter on the Friday prior to classes beginning. At this faculty meeting the president traditionally gives a state of the college address. As acting president this year, it was my responsibility to give this state of the college address. In a decision to depart from the normal speech, the upcoming 1986-87 academic year was the topic. Georgia Southern was faced with a 10.5 percent enrollment increase this fall; however, few additional resources were provided to support that kind of increased enrollment.

Five goals were outlined for Georgia Southern to accomplish during the academic year. One of those goals was: "In the midst of increasing enrollment . . .(to renew) our commitment to provide for every student an excellent educational opportunity in a comfortable environment with quality support services. At Georgia Southern we have had a distinguished history in this area. However, it is critical for our students and for the long term health of the institution that we should accomplish this goal this year." A very crowded situation would exist, particularly for the fall. Student housing would be full. Classes would be full. Office, classroom, and student activity space would be very scarce. In this type of environment the faculty were challenged to exhibit empathy or concern, to be very sensitive to the individual differences of our students, our staff, and our faculty.

Universities and colleges are in a competitive environment for the limited number of students. For this reason higher education must continue to be concerned about students' assessment of their educational experience—not just Georgia Southern, but all institutions. This does not mean, however, that we have to sacrifice academic standards to make our students happy. And higher education must guard against technology replacing concern for students. Concern for students has been an important factor for a number of years at Georgia Southern; however, the retention question is refocusing our concern for students.

The University System's requirement for retention studies forced Georgia Southern to examine where we were in 1982-83. During the summer of 1983 a joint retreat was sponsored by the University System for academic deans and department heads. Lee Noel made a presentation on retention which included the results of a national retention study which was supported by ACT and NCHEMS and published in 1978. Following that meeting we realized that the 60 percent retention rate at Georgia Southern was below the average for our type of institution. This retention rate was based on first-time, full-time freshmen. This finding was a disappointment because we felt that our institution was doing well in the area of retention. It must be admitted, however, that previously we did not really know what our retention rates were nor did we know how they compared with national data.

To increase retention, action taken in the 1983-84 academic year involved the following steps. First, we educated our faculty and staff regarding our own institutional numbers, relationship to the national data, and what factors research showed were relative or significant in retention or attrition. A task force to study retention and to make recommendations to be implemented for the fall of 1984 was established. The importance of teaching was continually emphasized and two institutional faculty awards for excellence in the area of contributions to instruction were developed. Finally, additional incentives for faculty working in our academic advisement center were provided as well as outstanding advisors being nominated for regional and national recognition.

As a result of the task force recommendations, the following actions were taken. The faculty development committee sponsored a workshop on advising and retention. The ACT evaluation surveys were administered and used as a follow-up to these workshops. An academic intervention program was implemented to assist highest-at-risk students, primarily freshmen in academic difficulty. New freshmen on academic probation would follow these regulations: (a) enrollment in a three-hour, four-credit study skills course involving time management and other concepts, (b) reduction of class load to no greater than 13 hours, (c) regular meetings with their academic advisors. Finally, placement criteria for entering freshmen for the areas of mathematics and English were amended.

These actions were not fully implemented until the fall of 1984. Retention rates for first-time, full-time freshmen over a three year period are as follows: 1982-83, 60 percent retention; 1983-84, 60 percent retention; 1984-85, 66 percent retention. Actions taken in 1984 resulted in a 6 percent retention increase of new first-time, full-time freshmen.

Secondly, research studies do not indicate an institution with a high retention rate is therefore an institution of high quality. Dr. Patrick Terenzini points out the inability to explain more than 40 percent variance in student attendance patterns. Retention is obviously a complex phenomena to explain. The Georgia Southern experience is not a formal study; however, our experience indicates that improving retention rates are perhaps an indicator of a healthy, positive attitude toward students, towards faculty, and towards the teaching/learning process.

Two recent works identify characteristics of quality or excellence in institutions: first, Peters and Waterman's, *In Search of Excellence*, regarding the private sector, and *Searching for Academic Excellence*, regarding higher education. In the first study, Peters and Waterman attempted to answer the question: What do successful companies do right? Of the ten factors that the authors found, four have important implications for higher education and retention:

1. Successful companies stay close to their customers paying close attention to product quality.

2. They engage in hands-on management and treat employees as people, not workers.

3. They stick to their "knitting," they do not diverse into businesses that they do not know how to run.

4. Finally, they remember that productivity can only be achieved through people.

The parallel study in higher education involved twenty institutions and identified ten factors that make up excellence which were present in at least 75 percent of the twenty institutions. The three important ones are: (a) teamwork, or getting into the end zone, (b) room for individual initiative, and (c) exhibiting a genuine concern for students and faculty (in the study called campuses with "heart").

Both studies, the one in the private sector and the one in higher education, identify a

concern for customers or students and a concern for employees, faculty and staff. This concern agrees with the top five positive characteristics that were identified by Noel and Beal in their study published in 1980. These characteristics of higher education institutions were: (a) a caring attitude of the faculty and staff, (b) high quality of teaching, (c) adequate financial aid, (d) student involvement in campus life, and (e) a high quality of advising.

In reviewing the new SACS *Criteria for Accreditation*, retention per se is not mentioned. The *Criteria* stresses the quality of the academic program, the quality of teaching, advising, and other components which relate to concern for the students.

Finally, good retention statistics are a by-product of the efforts of our educational institutions to pay close attention to our customers and to the quality of our product.

In closing:

Isn't it strange that princes and kings
    and clowns that caper in saw-dust rings
and common folks like you and me,
    are builders of eternity.

To each is given a bag of tools,
    a shapeless mass, and book of rules,
and each must make ere life has flown
    a stumbling block or a stepping stone

To the extent that we build stepping stones in our institutions of higher education, retention statistics will take care of themselves.

REFERENCES

Beal, P.E. and Noel, L. *What Works in Student Retention*. Iowa City, IA and Boulder, CO: ACT/NCHEMS, 1979.

Gilley, J.W., Fulmer, K.A., and Reithlingshoefer, S.J. *Searching for Academic Excellence: Twenty Colleges and Universities on the Move and Their Leaders*. New York: MacMillian Publishing Co., 1986.

Peters, T.J., and Waterman, R.H., Jr. *In Search of Excellence: Lessons from America's Best-run Companies*. New York: Harper and Row, 1982.

Southern Association of College and Schools. *Criteria for Accreditation: Commission on Colleges*. Atlanta: 1984a and 1984b.

APPENDIX A

"ASSESSING THE INSTITUTIONAL EFFECTIVENESS OF STUDENT RETENTION"

Fourth Annual Conference on Research in Postsecondary Education

GEORGIA CENTER FOR CONTINUING EDUCATION
UNIVERSITY OF GEORGIA
ATHENS, GA 30602

DECEMBER 1-2, 1986

Sponsored by:

UNIVERSITY OF GEORGIA
Institute of Higher Education
Center for Continuing Education
Office of Institutional Research and Planning

in cooperation with
THE UNIVERSITY SYSTEM OF GEORGIA

HIGHER EDUCATION IN GEORGIA:
"Assessing the Institutional Effectiveness of Student Retention"

Monday, December 1st

12:00 - 1:00 p.m.	Registration
1:00 - 2:00 p.m.	Opening Session: Cameron Fincher, Presiding
	"What Research Tells Us About Student Retention"
	Patrick Terenzini Institute of Higher Education
2:00 - 3:00 p.m.	Claire Swann, Chair Panel: Where the Problem Begins
	"The Expectations of Entering Freshmen"
	Tom Redmon Southern Association of Independent Schools
	"Getting Students Ready for College"
	Joe Marks Southern Regional Education Board
	"Entrance Requirements That Make Sense"
	Nathaniel Pugh, Jr. Georgia Southern College
3:00 - 3:15 p.m.	Break
3:15 - 4:15 p.m.	Mike McCord, Chair Special Problems in Technical Education:
	"Problems in Defining Retention State-wide"
	Fred Kiehle State Board of Postsecondary Vocational Education
	"Another State's Perspective in Technical Students"
	Diana Joseph Greenville Technical College
	"The Special Problems of Retaining Technical Students"
	Jennifer Coplin Savannah Technical School

4:15 - 5:00 p.m.	Larry Jones, Chair Panel Discussion: Retention Programs That Work Fran Rauschenberg University of Georgia John Sallstrom Georgia College
5:00 p.m.	Conference Recess
6:30 p.m.	Dinner Session: Herman Smith, Presiding "Principles of Learning and Development: Can They Help?" Cameron Fincher Institute of Higher Education

Tuesday, December 2nd

8:15 - 9:00 a.m.	Morning Session: Le-Quita Booth, Presiding "Placement and Retention in Remedial Programs" Ansley A. Abraham Southern Regional Educational Board
9:00 - 10:00 a.m.	Louise Tomlinson, Chair Panel: Effectiveness in Student Retention "Factors Influencing Retention in Private Four-Year Colleges" Willisia Holbrook Wake Forest University "Programs That Work in Private Two-Year Colleges" Ron Weitman Truett-McConnell College "Rates of Retention in Technical Programs" Berman Johnson DeKalb Technical School
10:00 a.m.	Break

10:15 - 11:00 a.m.

Libby Morris, Chair
Special Issues in the Health Professions:

"Conceptual Aspects and Practical Approaches"

James Rapella
Armstrong State College

"Retention Models for Minority Students"

Delmas Allen
Georgia State University

"Retention Issues in Medical and Health Education"

Jean Morse
Medical College of Georgia

11:00 - 12:00 p.m.

Haskin Pounds, Chair
"Institutional Studies on Retention"

Larry Jones
Institutional Research/University of Georgia

Glynton Smith
Institutional Research/Georgia State University

12:00 p.m.

Luncheon Session: Nathaniel Pugh, Presiding

"Student Retention As a Measure of Institutional Quality"

Harry Carter
Vice President for Academic Affairs
and Acting President
Georgia Southern College

Wrap-Up

Patrick Terenzini
Institute of Higher Education